New Freighthouse Is Record Prefab

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October 13, 1958

RAILWAY AGE *weekly*

A big shipper reports on Flexi-Van service

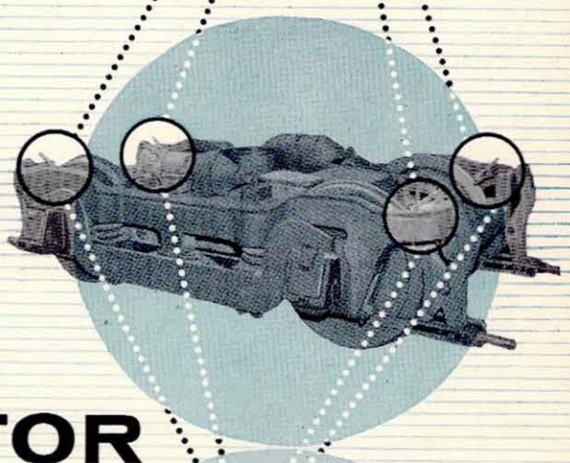
New controls help B&O trim Motive Power Cost

60 cents A Simmons-Boardman TIME SAVER Publication

EXTEND

LOCOMOTIVE WHEEL LIFE

30% TO 300%!



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USING *Nalco* **"MOLY"** STICKS

Nalco "Moly" Stick is a highly-efficient *dry* lubricant that maintains a lubricating surface between locomotive wheel flanges and track under extremes of pressure and temperature . . . without *picking up dirt and sand to form a grinding compound.* In new Nalco Type TA Lubricators, "Moly" Sticks provide automatic flange lubrication that has extended wheel life from a substantial 30% to as much—particularly on yard locomotives—as a whopping 300%!

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When winter comes, use Winter Kings

The Winter King switch heater is a compact little unit designed to fit easily between the ties and under the rails. Kerosene-burning, it furnishes a friendly orange flame which melts the snow as it falls. The 1½ gal fuel chamber is sufficient for from 9 to 15 hours of operation, depending on the easily-adjusted size of the flame.

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On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation.
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BETHLEHEM STEEL

Portrait by Editta Sherman

"Big job of automation still remains for the railroads,"

says W. Wendell Reuss, Manager, Railroad Securities Department, W. E. Hutton & Co., New York City, N. Y.

"Automation in the form of Centralized Traffic Control has been widely accepted by the nation's railroads. But much C.T.C. installation, with its resultant cost savings, still lies ahead. And the 'surface has only been scratched' in the utilization of cost-cutting automatic yards."

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UNION SWITCH & SIGNAL

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NEW YORK • PITTSBURGH • CHICAGO • SAN FRANCISCO

RAILWAY AGE *weekly* October 13, 1958 • Vol. 145, No. 15

Week at a Glance

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Passenger service: Not dead yet ..... p. 9

AAPTO has its most spirited meeting ever. Among passenger-problem solutions discussed: lower first-class fares, more package trips, new—or remade—cars.

Automation keys railroad growth p.10

RS&PA meeting hears what automation has done for the industry, how to sell new ideas to management and what expanding its machine set-up has meant to a smaller road.

Missiles can ride the rails p.13

The New York Central has come up with a secret, swift and shock-free method for handling delicate missile shipments—and all sensitive instruments and machinery.

Tuggle chides roads on U. S. loans p.14

ICC Commissioner Tuggle sees a first bid breaking the log-jam, says 660 roads are eligible to apply. The New Haven may make the initial move.

Record prefab freighthouse aims at LCL p.17

The Burlington has invested $3 million in its belief that less-carload traffic will continue to be an important part of its business. The money was spent for a new freighthouse near the road's Cicero, Ill., automatic classification yard.

New controls help B&O trim motive power costs p.22

The new cost-control system will be applied also to car and material costs. Here's how the system helped the B&O motive power and equipment department in its fight to control expenses.

A big shipper reports on Flexi-Van service p.34

The service is "bringing new business to us daily," says A. E. Perlman, New York Central president. Sunshine Biscuit started using the service when it began last April, has used it ever since. This special Railway Age report tells you why.

P-S makes old cars like new at low cost p.39

Can your railroad use "like-new" passenger equipment costing about one-third the price of new cars? Pullman-Standard's remanufacturing program, about ready to slip into high gear, could be just the shot in the arm your passenger business needs.

The Action Page—Find substitutes for subsidy! p.52

Railroad capacity and efficiency must not be allowed to deteriorate for lack of adequate new investment. Expedients to this end, however, must not jeopardize the railroads' status as unsubsidized free enterprise.

Richmond, Fredericksburg & Potomac

USES ITS NO. 112 TO BATTEN DOWN AGAINST HURRICANES

THIS versatile Caterpillar No. 112 Motor Grader is building a defense against hurricane damage for the Richmond, Fredericksburg & Potomac RR. North of Ashland, Va., it is cutting banks and maintaining haul roads as the railroad restores damaged roadbed and stabilizes banks.

The job calls for moving 110,000 cu. yd. of gravel and clay. The grader is a key piece of equipment. For it not only does its own specialized job (cutting banks), but by maintaining haul roads it helps the railroad get the highest possible production from its other Caterpillar-built equipment.

This kind of versatility makes the hard-working rig invaluable for all kinds of off-track jobs. Besides shaping embankments and maintaining roads, it will level irregular fill, control weeds and brush, police yards, clean side ditches and even clear snow.

And it works efficiently and economically. For instance, it can burn low-cost fuels such as No. 2 furnace oil—and do it *without fouling!* Positive acting controls and wide range of blade positions increase operator efficiency. So do these recent improvements: adjustable seat and back rest and taller cab with better ventilation and 31% more window area. Newly designed front axle components provide extra strength, longer life.

In addition, each CAT* Motor Grader is backed by your Caterpillar Dealer who specializes in fast, efficient service and maintains a complete inventory of parts for you. He'll be happy to demonstrate his machines on one of your own jobs. Just call him.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR*

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WANTED— THE HARD WORK

Week at a Glance CONT.

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Extension of Flexi-Van . . .

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Normal production at two Electro-Motive Division plants . . .

in Chicago and La Grange, Ill., resumes with the day shift today. Agreement reached last Wednesday afternoon ended a short-lived United Auto Workers strike involving Electro-Motive.

Automation Keys Railroad Growth

Railway Systems & Procedures Association hears railroad spokesmen stress automation's role, how to sell it to management and how it works.

Automation is the key to the growth of American industry—and to industry's ability to control its own bigness.

Summed up, that's the thesis presented by K. T. Reed, Chesapeake & Ohio's general superintendent of transportation, at last week's Railway Systems & Procedures Association meeting in Chicago.

C&O has been one of the most enthusiastic exponents of improved communications through application of modern data-gathering and processing methods. But, despite installation of such integrated facilities as the Car Location Information Center (CLIC) at Huntington, W. Va., C&O believes it has only scratched the surface.

"CLIC," Mr. Reed declared, "is a bold beginning in an area where there is much to be done. We must plan today to meet the ever-increasing competition we will face tomorrow."

Industrial growth in the U. S., he said, would have been nowhere so spectacular had it not been for basic inventions in communications, data-gathering, data-handling equipment and automation in general.

As for the future, "there is no limit to the size or growth of a company . . . provided that ample thought has been given and action has been taken to assure absolute management control from the top. To do this, we must continually strive to shorten the communications distance between the production line and headquarters."

Electronic devices now in use and under development, Mr. Reed predicted, will enable management to gather data faster than ever before, record it with tremendous speed, check it for accuracy and finally "interpret and analyze the data and give it in a concise form to top-management for decision-making, rather than for historical fact-finding.

Industry, he concluded, is going to have to produce more, to meet demand and maintain expected increases in the standard of living—and "this can only be done through automation . . ."

Developing new methods, however, is one task. Selling those new methods up through various levels of management can —sometimes—be a task of a different sort. L. A. Evans, president and general manager of the Belt of Chicago and the Chicago & Western Indiana, was on hand with a half-dozen sales tips for overcoming the "it-won't-work-here" response given—on occasion—to fresh ideas. His advice:

- Attract management's attention. Place a dollar value on the idea. Key the approach to whatever is paramount at the moment.
- Make the presentation factually complete and accurate. List pros and cons, then overcome the cons. Avoid a negative approach.
- Apply the principle of completed

(Continued on page 49)

Watching Washington *with Walter Taft*

Mr. Taft is on vacation. During his absence, this column is being written by other members of the staff.

• **BEHIND THE ICC'S DECISION** to grant a $1,300,000-a-year commutation fare increase to the Jersey Central: the fear that the JC, if it didn't get the increase, would follow the lead of the Erie and New York Central and try to scrap its Hudson River ferry service (RA, Sept. 22, p. 10).

THE COMMISSION authorized the Jersey Central to charge railroad passengers using its Jersey City-New York ferries 20 cents for the ferry ride. At present, commutation tickets don't specify a ferry charge, but around 4.4 cents for each through fare is allocated for ferry expense.

REJECTED was the protest of New Jersey's Board of Public Utility Commissioners that the proposed increase was "unjust and unreasonable." Said the Commission: "The alternative [to a fare increase] may well be the initiation of a proceeding by the petitioner, now authorized under the [Interstate Commerce] Act, to abandon its ferry operation."

FERRY TROUBLES aren't new in New Jersey. The Erie and New York Central a few weeks ago invoked the Transportation Act of 1958 (which broadens ICC authority over interstate service cuts) in an effort to abandon their own Hudson River ferries. New Jersey challenged the ICC's right to permit the discontinuance, and the case is now in the federal courts (RA, Sept. 22, p. 10).

• **THE 1958 TRANSPORTATION ACT** played a role in another passenger fare case decided last week. The ICC (which got a clear mandate from Congress to overrule state authorities on intrastate matters affecting interstate commerce) approved an increase from 12 to 15 cents in the intrastate fares of the Hudson & Manhattan in New Jersey. Reason: the state-established lower fare in New Jersey constituted "unjust discrimination" against interstate passengers on the same line.

• **THE FREIGHT CAR SITUATION** is "serious"—but "not quite as serious" as it looks. That's AAR President Daniel P. Loomis' reply to ICC Chairman Howard Freas' warning that a business upturn would find the railroads desperately short of serviceable cars (RA, Oct. 6, p. 10).

MAIN POINTS made by Mr. Loomis: of 143,943 cars now on the bad order list, 32,844 could be slapped back into service after less than 20 man hours of repair work. Highest bad order ratio is among gondolas (11.7 per cent) and hoppers (10 per cent), but many of these are in the light repair classification. Only 6.6 per cent of the box car fleet is unserviceable; less than 5 per cent of the covered hoppers, flatcars and tank cars need repairs.

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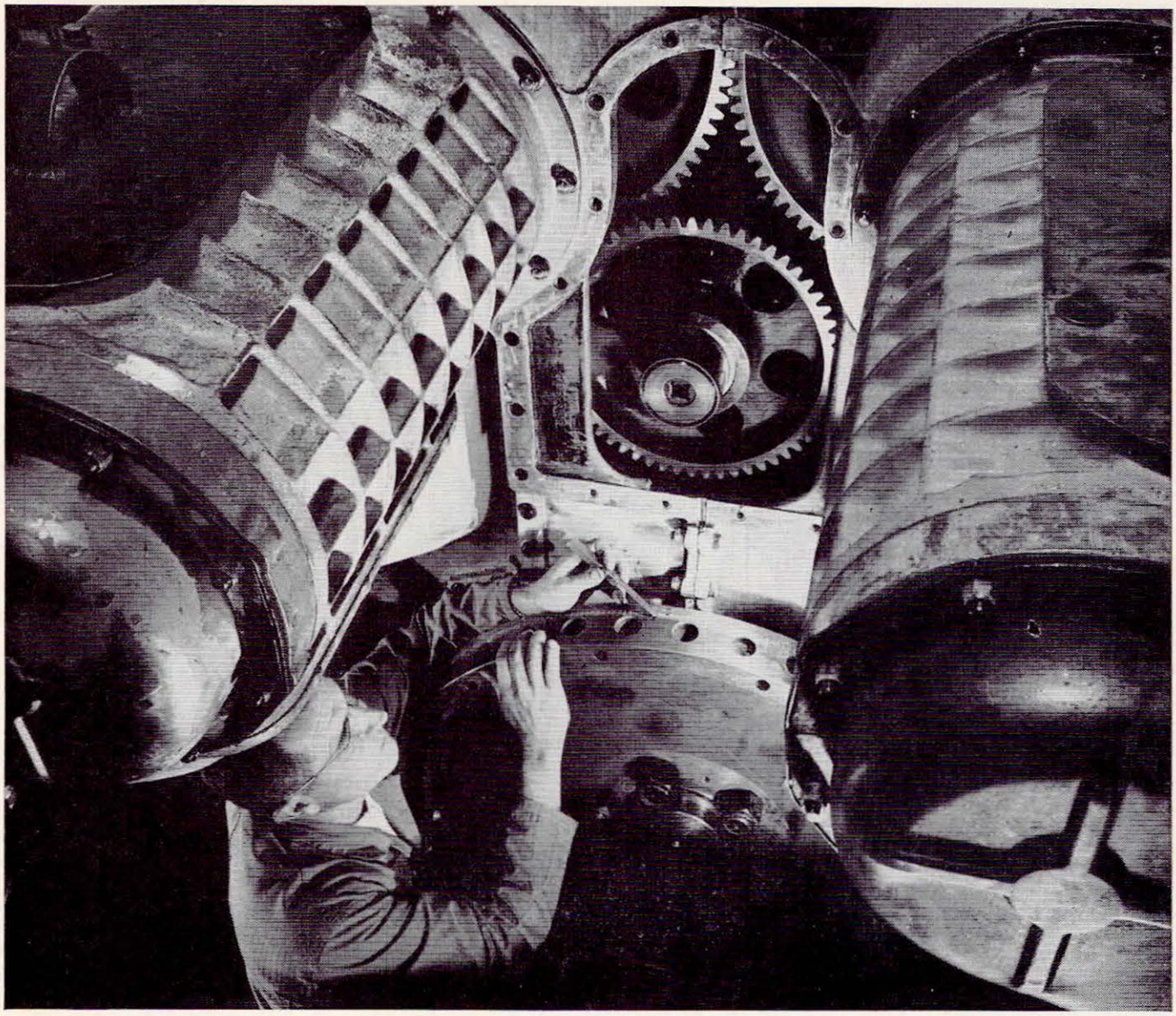
ENGINEER'S FIELD REPORT

PRODUCT RPM DELO OIL RR

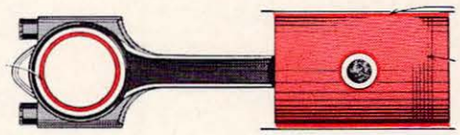
FIRM NORTHERN PACIFIC RAILWAY
South Tacoma, Wash.



RR diesel gears show only ½° wear in 2½ million miles

Timing gears on this Northern Pacific GMC-diesel locomotive engine, lubricated with RPM DELO Oil RR, recently completed 2½ million miles of severe freight service without repairs or adjustment. NP's South Tacoma Shop Foreman, A. R. Genin (above), indicates degree marks on engine flywheel, used to gauge gear wear. Tolerance between gear teeth shows variance of just ½° from original setting. Mr. Genin says, "We consider this low rate of wear remarkable for heavy-duty freight operation. It is typical of our experience during the 12 years we have used RPM DELO Oil in all our locomotive diesels." Engines are 1350 h.p. 16-567 series.

Why RPM DELO Oil RR reduces wear, corrosion



• Oil stays on engine parts—hot or cold, running or idle • Anti-oxidant resists lacquer formation • Detergent keeps parts clean • Special compounds prevent corrosion of bearing metals • Inhibitor resists foaming.

For More Information about RPM DELO Oils or other petroleum products of any kind, or the name and address of your nearest distributor, write or call any of the companies listed below.

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TRADEMARK "RPM DELO" AND DESIGN REG. U. S. PAT. OFF

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20

THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey

STANDARD OIL COMPANY OF TEXAS, El Paso

THE CALIFORNIA COMPANY, Denver 1, Colorado

Passenger Service: Not Dead Yet

Spirited AAPTO meeting in Santa Fe indicates that railroads are going to fight to keep the passenger trains running. Planned: lower first-class fares in the West; more 'package' trips; new cars—or at least remade ones.

Railroad passenger traffic men met last week with their dander up. They had been dealt, a few weeks before, a body blow in the form of an ICC statement that the part of railroad service for which they are directly responsible may be on the way out. In what probably was the most spirited meeting ever of the American Association of Passenger Traffic Officers, a good many roads set out to show that not until all possible methods of salvation have been tried will they admit that ICC Examiner Howard Hosmer is right.

What passenger men talked about at Santa Fe, N. Mex., will go, in part, before the traveling public as new sales tools in months to come. For instance:

- First-class fares may soon be coming down in a broad new area of the West.
- "Package" rail trips, including meals, and sometimes more, will show up in new places.
- New cars—or cars remanufactured to a like-new status (see p. 39)—are definitely possible in several parts of the country.

Representatives of roads which are commonly regarded by the public to be pulling away from passenger business went to lengths to show their determination to stay in it—if the business can be tailored to cover its full costs.

AAPTO members were told by two industry officers that they stand in perhaps the best position—as principal contacts with the public—to help overcome some of the railroads' burdens.

J. Handley Wright, public relations vice president of the AAR, urged passenger men to recreate the idea that railroads aren't quitters in the passenger business. Clair M. Roddewig, president of the Association of Western Railways, declared that "the very survival of our industry will depend in a large measure upon the kind of job you do in the days ahead in convincing the public that its own interests will be best served by legislative action that will wipe out unnecessary, discriminatory and unfair restrictions and regulation."

Brig. Gen. I. Sewell Morris, executive director of the Military Traffic Management Agency, said that group movements of military personnel in 1957 went 54.5 per cent to air carriers and 45.5 per cent to railroads measured in terms of dollars spent on transportation.

Gen. Morris warned AAPTO that, unless railroads can get cost and service considerations into line, his agency will be forced to direct more and more military moves away from the rails. He urged railroads to build up their car fleets to maintain their reserve capacity, and to build traffic volume to keep these cars busy.

Representatives of both Hertz and Avis car rental agencies urged AAPTO members to exploit more fully the possibilities of using rail travel combined with rental cars as a tool to combat highway competition. Vincent P. Conroy, vice president of Avis Rent-A-Car System, gave three reasons why he can't accept the conclusions of ICC Examiner Hosmer:

- A growing appreciation by Congress that equal opportunity must be provided for all forms of transport.
- A maturity in other methods of transportation with resultant labor and operating problems which affect rate-making levels. Railroad men have long had these same problems.
- Evidence of leadership in the railroad industry itself.

William J. Jann, assistant to Hertz's executive vice president, saw as passengerdom's biggest problem the attitude of people who think that they can travel long distances cheaper by car, and who worry because they wouldn't have a car at their destination if they went on the train.

Although little went into AAPTO's record on the subject, a big topic of discussion was the proposals of several Western carriers to reduce first-class fares to coach-fare level. One or two lines in the Pacific Northwest have been anxious to make the reduction immediately. But all such revisions have been postponed until the subject can be thrashed out at a meeting of passenger men in Chicago Oct. 22. In essence, northern transcontinentals would do what Missouri Pacific, Texas & Pacific and Kansas City Southern already have done in the Southwest.

These experiments with coach tickets in sleepers appear to be working out to the satisfaction of the roads involved. KCS Passenger Traffic Manager S. A. Watson, for instance, reported: "We are more than pleased with the approximate 40 per cent increase in occupancy and we will definitely extend the present expiration date beyond Dec. 31." He said that if the ICC concurs, the lower fare eventually will be made permanent. KCS had figured that a 20 per cent increase in occupancy would

(Continued on page 14)

New Rate Freedom—Or No Change?

Probably the most important segment of the Transportation Act of 1958 is the grant of more rate-making freedom to railroads. But the change is not clear-cut, as Clair M. Roddewig, president of the Association of Western Railways, pointed out in Santa Fe last week. . .

". . .While the language of the new law is not as positive as we had wanted, there can be no doubt that Congress intended to bring about an important change . . . to give each regulated form of transportation the right to make rates based on its particular conditions.

"Since enactment of the new law, a veritable revolution in price-thinking has been taking place in the railroad industry. This new-found freedom will surely result in several new merchandising methods, all of which will prove of great [public] benefit.

"However, it is disappointing to note that some members of the ICC have been making speeches . . . saying the new law only confirms the policy they have been following. If this is to be the final interpretation of the Commission, the new law may be meaningless. The public will continue to be denied the benefits of competitive pricing of transportation."

Automation Keys Railroad Growth

Railway Systems & Procedures Association hears railroad spokesmen stress automation's role, how to sell it to management and how it works.

Automation is the key to the growth of American industry—and to industry's ability to control its own bigness.

Summed up, that's the thesis presented by K. T. Reed, Chesapeake & Ohio's general superintendent of transportation, at last week's Railway Systems & Procedures Association meeting in Chicago.

C&O has been one of the most enthusiastic exponents of improved communications through application of modern data-gathering and processing methods. But, despite installation of such integrated facilities as the Car Location Information Center (CLIC) at Huntington, W. Va., C&O believes it has only scratched the surface.

"CLIC," Mr. Reed declared, "is a bold beginning in an area where there is much to be done. We must plan today to meet the ever-increasing competition we will face tomorrow."

Industrial growth in the U. S., he said, would have been nowhere so spectacular had it not been for basic inventions in communications, data-gathering, data-handling equipment and automation in general.

As for the future, "there is no limit to the size or growth of a company . . . provided that ample thought has been given and action has been taken to assure absolute management control from the top. To do this, we must continually strive to shorten the communications distance between the production line and headquarters."

Electronic devices now in use and under development, Mr. Reed predicted, will enable management to gather data faster than ever before, record it with tremendous speed, check it for accuracy and finally "interpret and analyze the data and give it in a concise form to top-management for decision-making, rather than for historical fact-finding.

Industry, he concluded, is going to have to produce more, to meet demand and maintain expected increases in the standard of living—and "this can only be done through automation . . ."

Developing new methods, however, is one task. Selling those new methods up through various levels of management can —sometimes—be a task of a different sort. L. A. Evans, president and general manager of the Belt of Chicago and the Chicago & Western Indiana, was on hand with a half-dozen sales tips for overcoming the "it-won't-work-here" response given—on occasion—to fresh ideas. His advice:

- Attract management's attention. Place a dollar value on the idea. Key the approach to whatever is paramount at the moment.
- Make the presentation factually complete and accurate. List pros and cons, then overcome the cons. Avoid a negative approach.
- Apply the principle of completed

(Continued on page 49)

Watching Washington *with Walter Taft*

Mr. Taft is on vacation. During his absence, this column is being written by other members of the staff.

• **BEHIND THE ICC'S DECISION** to grant a $1,300,000-a-year commutation fare increase to the Jersey Central: the fear that the JC, if it didn't get the increase, would follow the lead of the Erie and New York Central and try to scrap its Hudson River ferry service (RA, Sept. 22, p. 10).

THE COMMISSION authorized the Jersey Central to charge railroad passengers using its Jersey City-New York ferries 20 cents for the ferry ride. At present, commutation tickets don't specify a ferry charge, but around 4.4 cents for each through fare is allocated for ferry expense.

REJECTED was the protest of New Jersey's Board of Public Utility Commissioners that the proposed increase was "unjust and unreasonable." Said the Commission: "The alternative [to a fare increase] may well be the initiation of a proceeding by the petitioner, now authorized under the [Interstate Commerce] Act, to abandon its ferry operation."

FERRY TROUBLES aren't new in New Jersey. The Erie and New York Central a few weeks ago invoked the Transportation Act of 1958 (which broadens ICC authority over interstate service cuts) in an effort to abandon their own Hudson River ferries. New Jersey challenged the ICC's right to permit the discontinuance, and the case is now in the federal courts (RA, Sept. 22, p. 10).

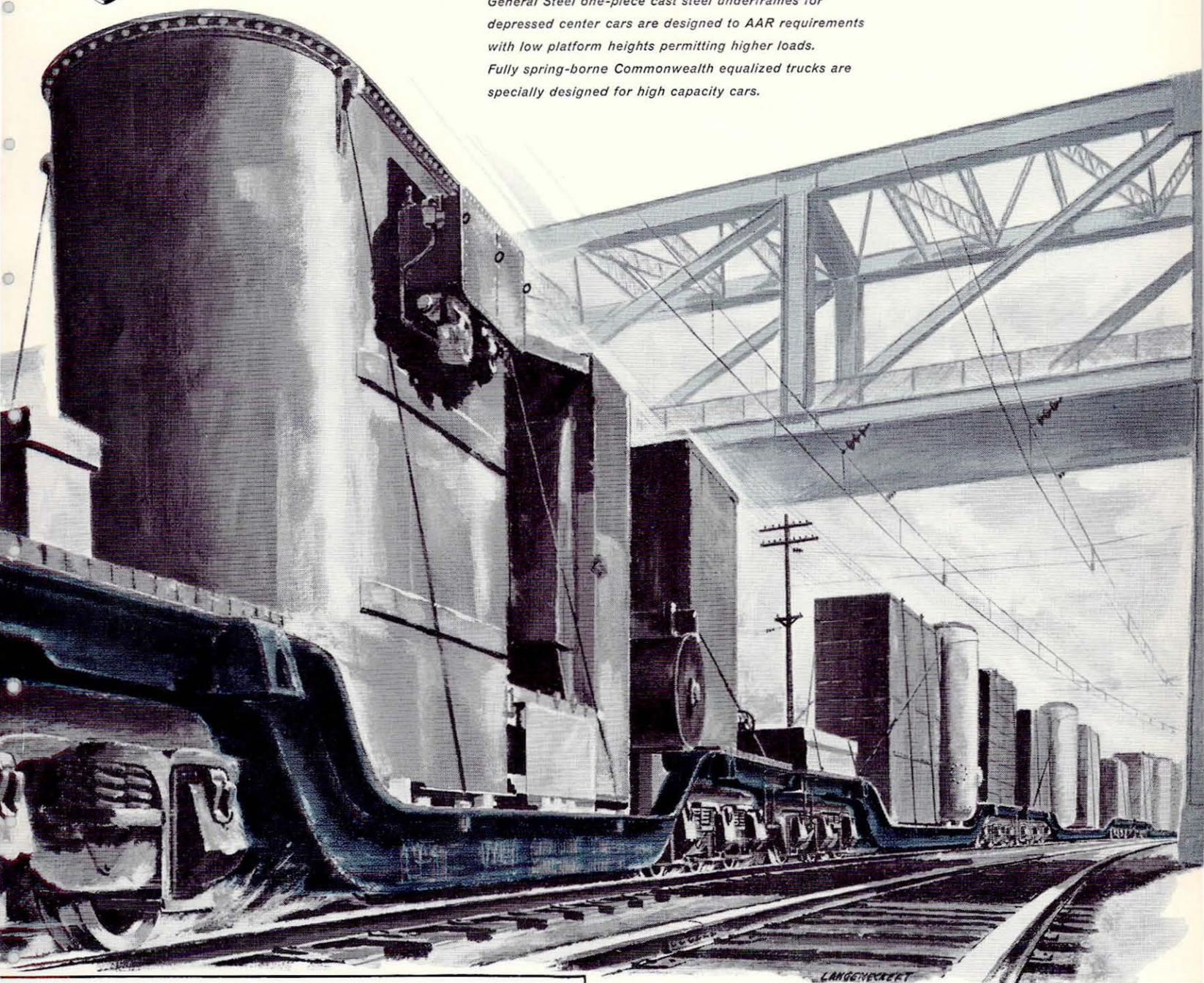
• **THE 1958 TRANSPORTATION ACT** played a role in another passenger fare case decided last week. The ICC (which got a clear mandate from Congress to overrule state authorities on intrastate matters affecting interstate commerce) approved an increase from 12 to 15 cents in the intrastate fares of the Hudson & Manhattan in New Jersey. Reason: the state-established lower fare in New Jersey constituted "unjust discrimination" against interstate passengers on the same line.

• **THE FREIGHT CAR SITUATION** is "serious"—but "not quite as serious" as it looks. That's AAR President Daniel P. Loomis' reply to ICC Chairman Howard Freas' warning that a business upturn would find the railroads desperately short of serviceable cars (RA, Oct. 6, p. 10).

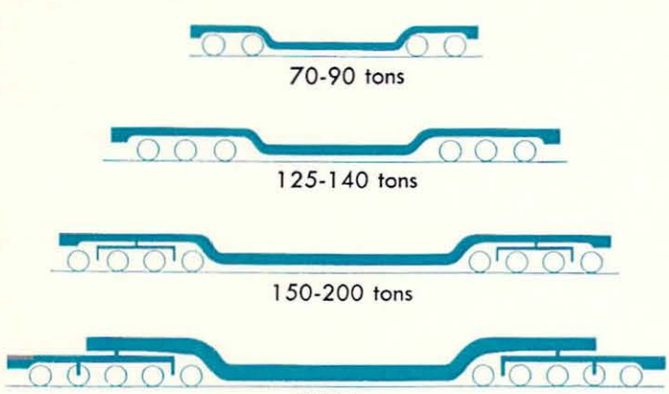
MAIN POINTS made by Mr. Loomis: of 143,943 cars now on the bad order list, 32,844 could be slapped back into service after less than 20 man hours of repair work. Highest bad order ratio is among gondolas (11.7 per cent) and hoppers (10 per cent), but many of these are in the light repair classification. Only 6.6 per cent of the box car fleet is unserviceable; less than 5 per cent of the covered hoppers, flatcars and tank cars need repairs.

Where railroad progress is cast in steel....

General Steel one-piece cast steel underframes for depressed center cars are designed to AAR requirements with low platform heights permitting higher loads. Fully spring-borne Commonwealth equalized trucks are specially designed for high capacity cars.



A complete range of sizes from 70-ton to 250-ton capacities are available.



Creating "ideas in cast steel" to meet the needs of the railroad industry! For more than 50 years this has been the never changing goal of General Steel Castings.

Meeting a railroad need, Commonwealth products are planned and designed to insure a sound economic purchase. For, like General Steel, railroads and other industry must look ahead with long-term operations in mind.

Commonwealth products, with their great strength, low maintenance and unsurpassed record of performance, are truly an investment for your profit... now and in the future.

GENERAL STEEL CASTINGS

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CAT FUEL INJECTION EQUIPMENT CUTS COSTS BY PROVIDING MAXIMUM ENGINE PERFORMANCE

Presetting at factory for accurate performance eliminates field settings, makes installation of Caterpillar fuel injection pumps quick and simple.

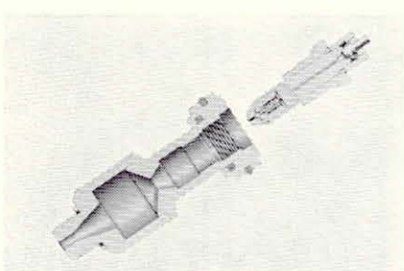
The fuel injection system is a key to peak engine performance. It must deliver to each cylinder equal amounts of fuel at precisely the right time. Deviation means a loss in horsepower. That's why it pays to use Cat fuel injection equipment.

Cat injection equipment can save you money in other ways, too. No field or operating adjustments are necessary. Installation is *quick and simple*. All pumps are interchangeable for different cylinders and between engines of the same model.

This interchangeability permits smaller parts inventories, makes replacement inexpensive by eliminating custom fitting, and makes replacement possible in a matter of *minutes* right on the job regardless of the experience of the mechanic.

Genuine Caterpillar injection equipment is built to last. With clean fuel, a life of 20,000 service meter hours is not unusual.

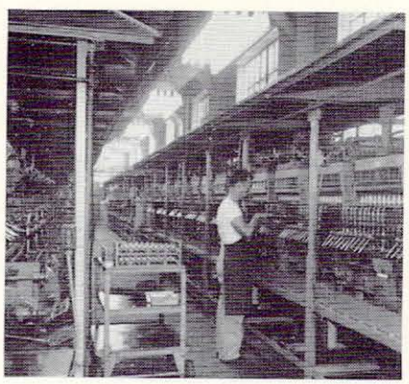
Pumps, plungers and barrels are manufactured from the finest chromium alloy, so hard that diamond dust is required for lapping the plungers and barrels. Pumps are tested and preset at the factory to provide accurate metering, timing and fuel pressure.



HIGHEST STANDARDS in the industry go into the manufacture of Caterpillar fuel injection equipment. Pump plungers and barrels, for example, are finished to tolerances so fine that the heat from your hand will expand a plunger enough to make it larger than the matching barrel.

SERVICE TIP

Your Caterpillar Dealer has the testing equipment to determine accurately when fuel injection systems parts should be replaced. And testing is the only sure way of knowing.



RUN-IN TESTS—four hours on pumps, two on valves – are conducted on these Caterpillar-built test machines before a pump or valve leaves the factory. Strict testing procedure means perfect performance of genuine Caterpillar injection parts.

Single-orifice fuel injection valves minimize the possibility of clogging or fouling. A spring-loaded plunger within the valve opens by fuel pressure at the proper time for uniform and precise injection. Extra protection is given by a fine-mesh screen. This clean, accurate injection means less down time and lowest fuel cost per unit of power.

Don't risk real damage to your Caterpillar equipment with an improperly functioning fuel injection system. Test systems regularly and replace worn parts with genuine Caterpillar parts. Your Caterpillar Dealer has the full story. See him today. And remember, he will carry your parts inventory.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

Improper fuel injection equipment can be expensive. For instance, if a machine's owning and operating cost is $10 per hour, its total cost in a 2,000-hour season is $20,000. For a 200-horsepower machine that's $100 per horsepower. A poorly functioning fuel injection system which robs the machine of 5% of its horsepower (10 HP) could mean a season loss of $1,000 (10 [HP] x $100). Don't take chances. Standardize on Cat equipment.

CATERPILLAR

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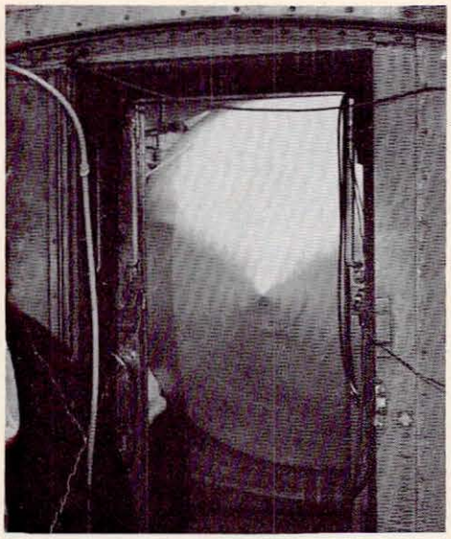
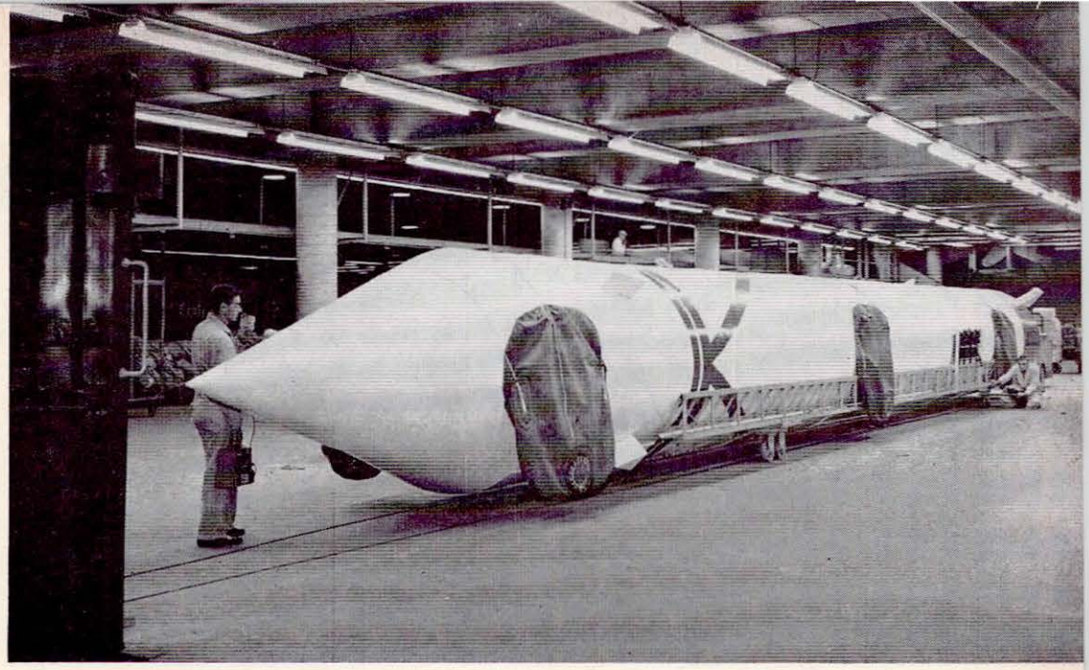


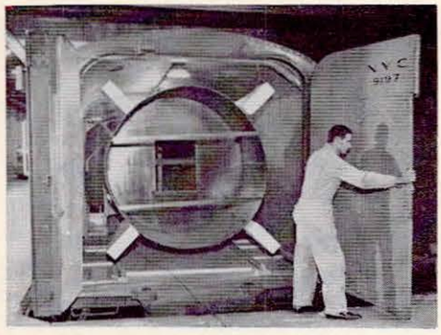
SEEN THROUGH OPEN DOOR of an adjacent car, mock missile fills New York Central baggage car in demonstration of shock-free missile shipment.



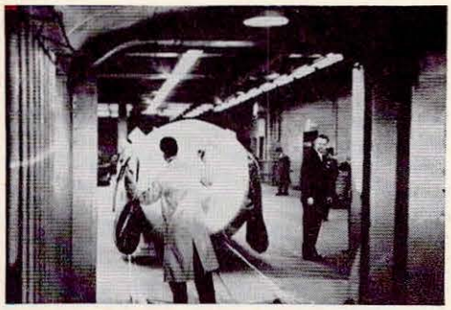
OUT OF THE CAR, with its air bags deflated, missile mock-up seems an unlikely load for shipment in an ordinary 70-foot baggage car. Ingenuity of Central's Technical Research Center found a way to ship missiles after earlier studies declared that the problem was an insoluble one.

Secretly, Swiftly, Shock-Free.....

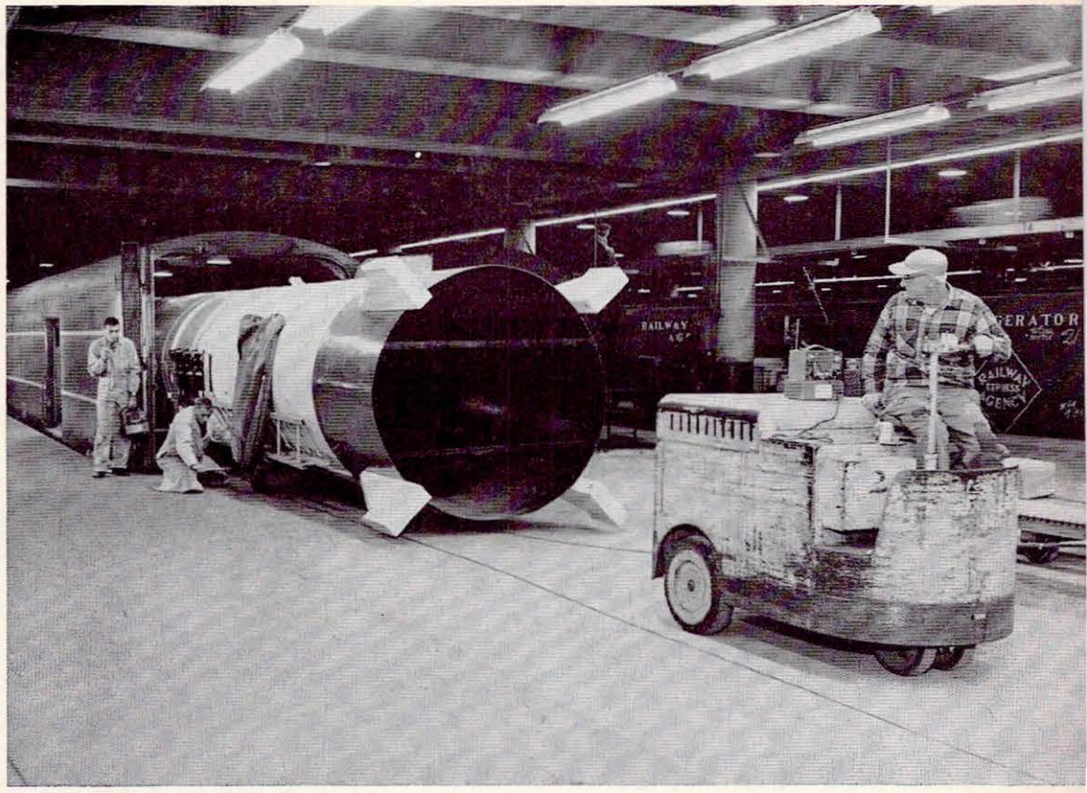
Missiles Can Ride the Rails



KEY TO THE PROBLEM is air suspension to keep delicate electronic control system from damage en route. Ten air bags, manufactured by New York Rubber Co. for dunnage, absorb full shocks of rail travel (RA, Oct. 6, p. 37).



LOADING AND UNLOADING is accomplished by means of temporary tracks. Total cost of tracks, air pillows, etc., is under $2,000. No alteration to the car is required, says James J. Wright, director of the laboratory (in dark suit above).



FULL-SCALE, FULL-WEIGHT MODEL of a missile, built by the NYC specially for demonstrating their new technique, rides easily on dolly wheels attached to the missile support frame. Entire operation can be performed by a small industrial truck. Road president A. E. Perlman commented "These tests convinced us that the Central can transport these missiles with no damage to them, but what makes us even happier is that we can adapt this method to all sensitive instruments and machinery."

Tuggle Chides Roads on U.S. Loans

New Haven makes first move, may ask $18.5 million. Commissioner thinks a first bid will break log-jam, says 660 roads are eligible to apply.

Interstate Commerce Commissioner Kenneth H. Tuggle chided railroads last week for not taking advantage of government-guaranteed loans authorized by the 1958 Transportation Act.

"It is indeed difficult to understand the railroads' reluctance to apply for the guaranteed loans provided for in the new legislation," he told a directors' meeting of the Transportation Association of America at Ponte Vedra Beach, Fla. "Certainly, the situation calls for some pioneering leadership in breaking through the psychological barrier of this 'time lag' period. I feel confident that the needs exist, that the benefits would be material and that the first application will be followed by many others."

Mr. Tuggle said that about 660 railroads are eligible to apply for loans.

Other points made by Mr. Tuggle:

- The ICC "stands ready to give thorough and sympathetic consideration" to railroad merger proposals.
- The New York Central's offer to turn over its passenger facilities in New York City to the municipality—in return for a $6,500,000 tax saving—represents "the kind of advance thinking that is needed" to save the railroad passenger business.

Meanwhile in New York last week, the New Haven became the first railroad to make a positive move toward a government-backed loan. New Haven notified the New York Stock Exchange that it planned to call a special stockholders' meeting November 21 to seek approval for loans of $18,542,460.

The money requested is earmarked for three projects. By far the biggest portion, $16,542,460, will be in 15-year equipment obligations covering the purchase of 60 FL-9 dual-power locomotives from General Motors' Electro-Motive division. The line has 30 of these units already in operation, under a lease plan (RA, Feb. 24, p. 11). New funds will be used to buy these and another 30 already spoken for and will cut the cost of locomotive change at New Haven, Conn.

Next largest amount is $1,500,000 to be used for capital expenditures involved in centralizing company shop facilities at New Haven. The remaining $500,000 will be used to purchase mechanized maintenance-of-way equipment.

All of the money requested will come under the provision of the '58 Act covering loans for capital improvements. This means that the loans will not prohibit payment of possible dividends. (The loan provisions of the new Transportation Act stipulate that loans for maintenance prohibit the recipient from paying dividends while any part of the principal or interest of the loan is outstanding, but this does not apply to loans for capital improvement.)

Some railroad men have expressed doubt that any reasonably solvent railroad could qualify for a government-guaranteed loan, since these roads should be able to obtain credit from private sources (RA, Aug. 18, p. 9). There is another side to this, though. The loan provisions require a railroad to prove to the Interstate Commerce Commission that it is unable to borrow on reasonable terms without government backing. The question is how to interpret "reasonable" terms.

Some financial circles are saying that the New Haven probably could get an equipment loan at the going rate of around seven per cent. If, these people say, it could show it had been turned down on an application for a loan at a lower rate, it would satisfy the reasonable terms requirement. Since use of the government aid provision might well lower the servicing costs of the requested $16.5 million equipment loan by as much as two per cent, this is an important distinction.

Passenger Service: Not Dead Yet

(Continued from page 9)

compensate for the reduction in rail revenue. Therefore, with a 40 per cent increase, it has "substantial increase in new revenue." Some 60 per cent of the increased patronage is former airline passengers, Mr. Watson said.

"Slumbercoach" operations of both Burlington and Baltimore & Ohio came in for frequent plaudits. B&O representatives agreed that during summer months a second car could be operated profitably between Chicago and Baltimore on the Columbian." Burlington's Chicago-Denver and Chicago-Colorado Springs cars continue to operate at high average occupancies. During July and August the cars averaged 36.9 passengers (out of 39 beds sold) per car-trip.

Burlington will, incidentally, raise its $7.50 occupancy charge in "Slumbercoaches" Nov. 1 to help offset higher labor costs. The charge will go to $7.95 for the full trip, with slightly higher increases for local trips.

"Package trips," in which meal prices are lumped with rail fare, found new supporters this year. Santa Fe, for instance, expects in November to begin selling coupon books good for five meals plus tips on all its transcontinental trains except the "Super Chief." Price will be $10. Union Pacific is completing arrangements to add hotel accommodations and shows to its Los Angeles-Las Vegas package. And Rio Grande now is including free Red Cap service with its Denver-Salt Lake City "Prospector" package.

Rio Grande also has added a service for travelers who plan to stay at their destination only one day then return: Now they can leave their luggage in their Pullman room under lock and key.

Surprisingly enough, there was considerable talk about new—or rebuilt—equipment. The plan just announced by Pullman-Standard to remanufacture existing cars received much attention. New Haven currently has a coach at P-S's Worcester, Mass., shop. To see what rebuilding costs would be, several roads, among them Southern Pacific, are trying to determine whether they can add to their coach fleets by remodeling lightweight sleepers. And Union Pacific, which already has orders standing for more new cars than anyone else, has budgeted for additional new coaches next year.

Develop Cost Facts for ICC, Transport Professor Says

The Transportation Act of 1940, as written, a Columbia University professor contends, is not inconsistent with truly competitive rates between rail and motor carriers. Columbia's Professor of Transportation Ernest Williams said that, in practice, the policy has not been put into effect.

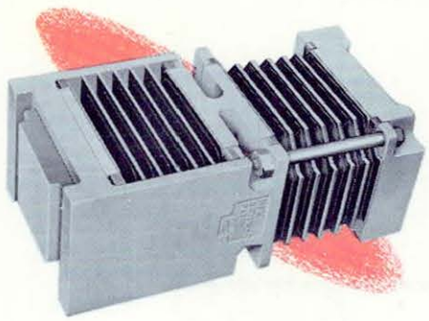
At the first of a 1958-59 series of Transportation Research Forum luncheons in New York, Prof. Williams said that the reason for this is a failure of the carriers to develop cost facts before the Interstate Commerce Commission that would induce it to authorize really competitive rates.

The situation could be corrected, the professor added, by bringing out the real costs of each form of transportation and taking advantage of this knowledge by basing rates on these costs. Rates, he said, are the railroads' answer to truck competition.

It is not feasible, he continued, to put rail service on parity with truck service in many cases, and it is unnecessary to try when rates based on costs will bring the business to the rails.

EQUIPMENT MODERNIZATION Key to Successful Railroading

National Rubber Draft Gears
on the Union Pacific



It is the 65,500 foot-pound cushioning capacity of National MF-400 Rubber Draft Gear that reduces center sill stress as much as 59%, thus giving greater protection to the car structure and lading.

Operating a large fleet of powerful locomotives, including modern gas-turbine-electric types, the Union Pacific has the highest average freight train speed of any Class I road. Many of the Union Pacific's locomotives and cars are equipped with National Rubber Draft Gears for impact protection.

In fact, today there are more than 30,000 carsets of National Rubber Draft Gears in service on North American railroads — many with service records of over 8 years and hundreds of thousands of maintenance-free miles.

AA-7223

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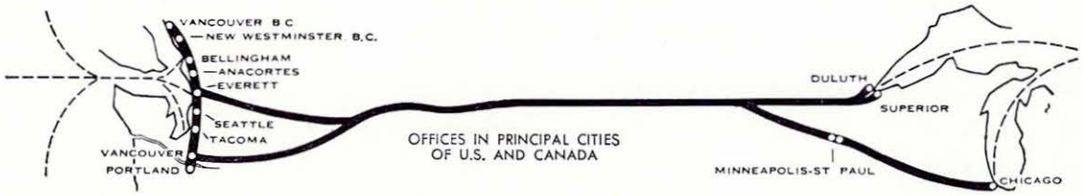
RAIL LINK

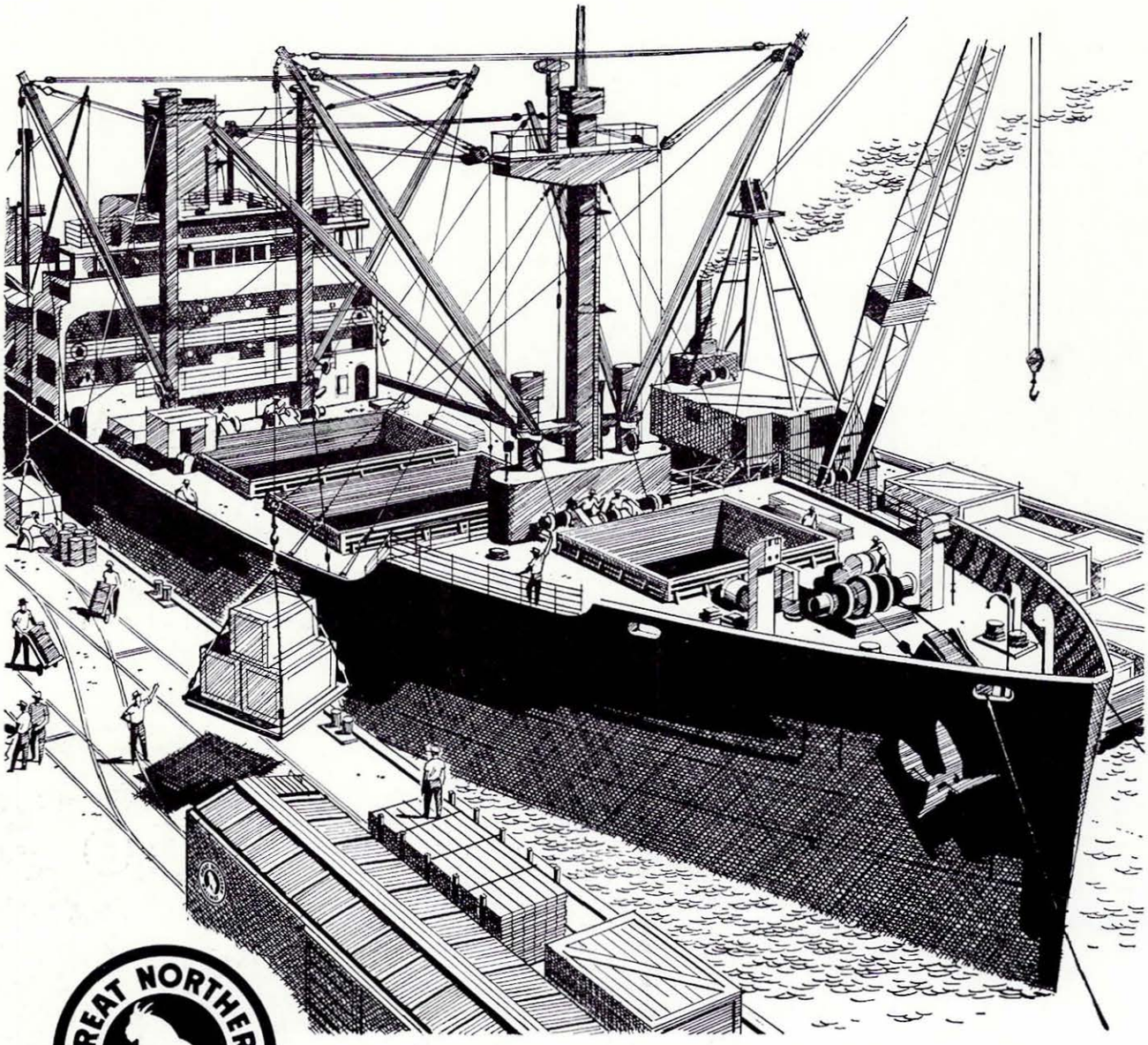
between Pacific and Great Lakes Ports



With direct access to principal Pacific and Great Lakes ports (see map), and rails that serve Mississippi River navigation, Great Northern is a great choice for shippers of goods to be transshipped by water. No other railroad links so many ports, east and west.

Great Northern has long specialized in careful, efficient handling of cargo requiring port terminal transfer. Get the benefit of this experience. *Write W. E. Nicholson, General Freight Traffic Manager, Great Northern Railway, St. Paul 1, Minn.*

P.S. Industrial sites on our trackage are available in port cities. Inquire in confidence. *Write E. N. Duncan, Great Northern Railway, St. Paul 1, Minnesota.*



GREAT NORTHERN RAILWAY

Great travel link with far Pacific lands
the Incomparable **EMPIRE BUILDER**
Daily between Chicago and Seattle-Portland

Record Prefab Aims at LCL

The Burlington's big new freighthouse at Berwyn, Ill. (a Chicago suburb) is designed to benefit shippers and receivers of less-carload merchandise traffic. The new house, shaped like an elongated "E," consists of a two-story headhouse and three platforms—with a cross platform at the headhouse end.

Designated as freighthouse No. 8, the new facility has 350,000 sq ft of covered area. The headhouse is brick and concrete; the covered platforms are constructed of galvanized-steel panels on rigid steel frames built by Butler Manufacturing Co. Reportedly, new house is largest Butler building built as one unit.

Located at the west end of the Burlington's new automatic classification yard at Cicero, Ill., the freighthouse is in close proximity to the hump yard. This permits the road to set a later close-up time than was possible when lcl business was being handled at freighthouses Nos. 1 and 2 in mid-Chicago.

"Our $3 million investment in this facility offers tangible evidence of our belief that lcl traffic will continue to be an important part of our business in the Chicago area and elsewhere around the system," said Burlington's President H. C. Murphy in a speech at the recent formal opening of the new building.

Fronting on Ridgeland avenue (drawing, p. 20), the new freighthouse permits all operations to be conducted under cover. Platform space totals 195,000 sq ft, and can accommodate a total of 200 cars on two groups of four covered tracks each. Tracks run nearly the full length of the house, 1,230 ft.

The two-story headhouse, 284 ft long by 24 ft wide, provides space for the freight office staff and supervisors on the ground floor. Lunchroom, washroom, locker and lavatory facilities for freighthouse dock employees are all located on the second floor. A special wall treatment, called Glazed Cement, gives a glazed-tile appearance to the surface of the concrete blocks that form interior walls of the headhouse.

Unusual feature of the new house is the construction of the covered platforms. The Butler Co. has designs for prefabricated buildings with 70, 80, 100 and 120-ft spans, but the 70-ft span used over the outbound platform is reportedly the first of this width fabricated by the firm.

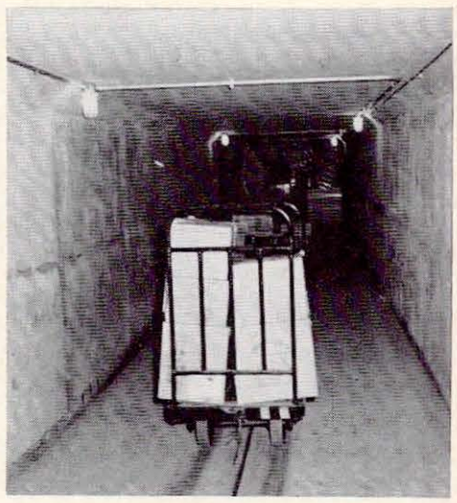
This outbound platform, on the south side of the house, is 76 ft wide. Here, outbound freight is stowed in cars set out on three of the four southerly tracks. The platform has 96 truck spots—certain doors being assigned for outbound over-the-road trailers, others for inbound "drop loads" in over-the-road trailers. Still other doors are assigned for railroad interchange shipments, for receipt of packages from local shippers and "hold" shipments, as well as for will-call, pickup and refused shipments.

The north working platform is for in-

(Continued on page 20)

FREIGHTHOUSE NO. 8 is a $3-million facility and extends nearly a quarter of a mile behind a modern two-story office section.

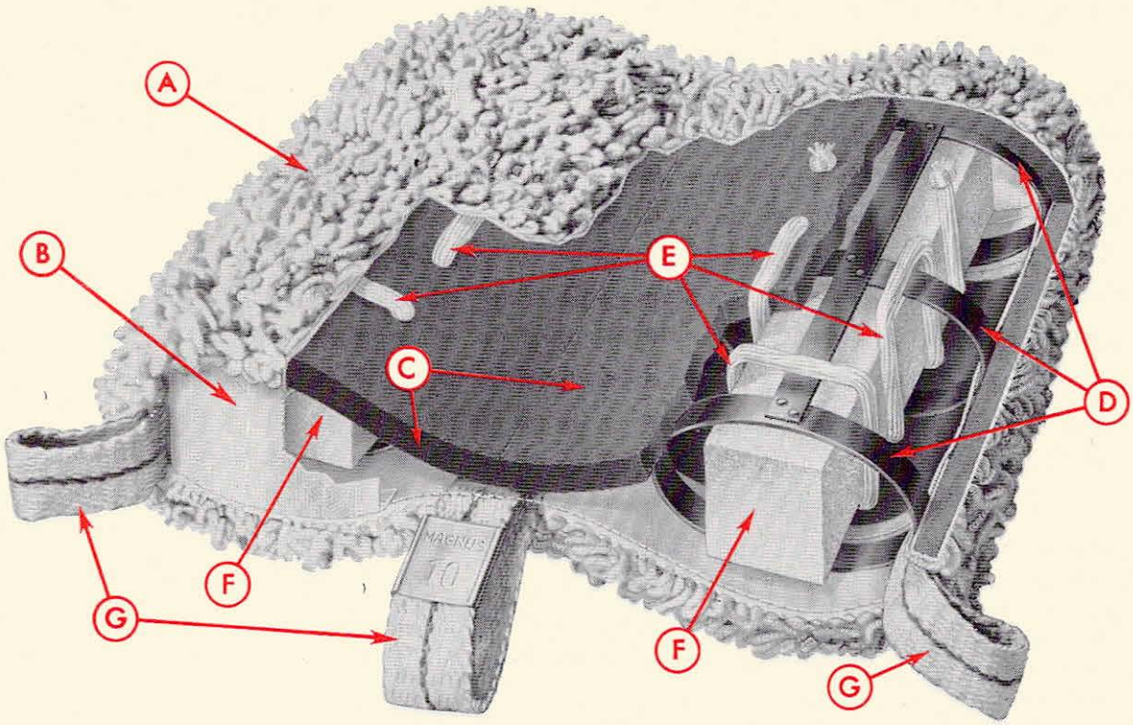
OVER-THE-ROAD trailer has been dropped off at one of the tailboard spottings. Package are loaded onto platform truck marked as to destination, and placed on the tow line.



TRUKVEYOR SYSTEM tows platform trucks to middle platform. Tow lines pass under the tracks in tunnels so they do not have to be stopped when the house is switched.

NOW—A CAR JOURNAL LUBRICATOR DESIGNED AND

IT'S THE NEW MAGNUS



FEATURES and ADVANTAGES

A **Outer Cover** of tufted premium quality cotton yarn with heavy duck backing provides an ideal application and absorption surface which is glaze-resistant. It is washed and shrunk prior to assembly, assuring proper fit, and is stitched at both ends to prevent raveling and bunching in service.

B **End Covers** of cotton bolting cloth web assure lasting strength and flexibility—keep dust and dirt out of the internal wicking materials—restrict oil loss.

C **One-Piece Felt Pad** backs up the tufted cover and is formed around the two sets of steel springs and sewn together on the center line to make a single pad, with twin-lobe design—a far more rugged construction with better capillarity than if two separate pads were sewn together.

D **Flat Steel Springs**—three firmly connected springs in each lobe maintain constant and correct pressure on the journal. Scaleless tempered spring steel will not sag and allow the pad to fall away from the journal. The springs are firmly secured to the underside of the felt and cover and are riveted to spring steel spacer strips—a construction that positively prevents misalignment or contact of springs with the journal.

E **Internal Wicks** of 25-ply Bostonia provide 16 supplementary oil paths from the bottom to the top of each Magnus Lubricator Pad. Thus the design includes a combination of circumferential wicking, internal wicking and center feed wicking, assuring ample oil flow under all conditions.

F **Polyurethane Cores**—used solely to increase oil reservoir capacity—make for greater margin of safety in event of oil starvation by contacting the 16 internal wicks.

G **Extra-Strong Loop Handles** extend through pad centers, will withstand a pull of 300 pounds before failing. Additional loop handles are provided at each of the four corners. Brass nameplate on center loop carries the size identification. Magnus Pads are currently available in standard sizes for 5 x 9, 5½ x 10 and 6 x 11 car journals.

MAGNUS Solid Bearings

MAGNUS METAL CORPORATION

BUILT BY JOURNAL BEARING EXPERTS

LUBRICATOR PAD

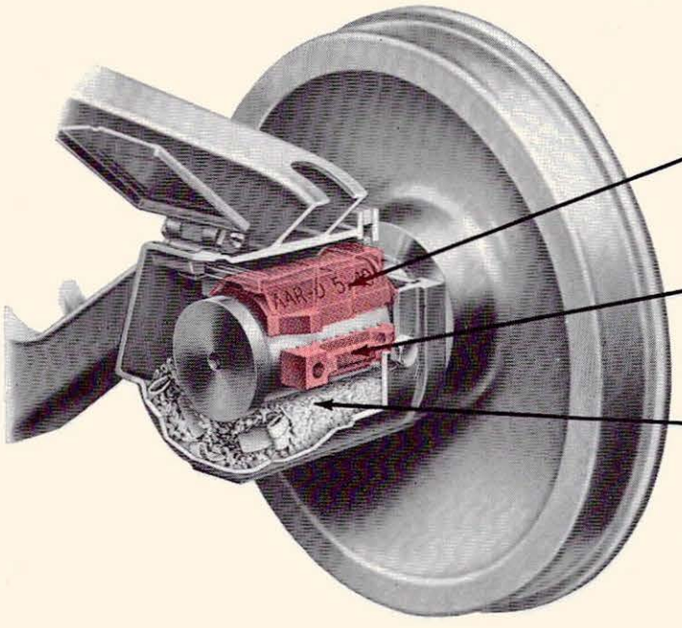
3-way wicking, large oil capacity, rugged one-piece twin-lobe construction are features of the MAGNUS journal lubricator that's now approved by AAR for interchange test installations

WHAT YOU need in a lubricator you get in the new Magnus Pad. First, there's maximum wicking — circumferential, internal, and center feed — to provide cooler operation and a far greater margin of safety in event of oil contamination. Internal wicks are *not entrapped* — wick more oil and are readily cleaned through normal reclamation process.

Then there's high oil-retention capacity — fully saturated, each Magnus Pad will hold more than 2.5 times it's own weight in oil — better than 5.9 pints for the 6″ x 11″ size.

The cover is heavy pre-shrunk duck tufted with premium quality cotton yarn (proved the most practical design) and backed with high capillarity felt. It's positively held against the journal at all times by elliptical tempered steel springs that eliminate sponge-type uplift media. The springs are firmly secured to both felt and cover. The whole is a unique one-piece twin-lobe reversible design, self-centering on the journal — end-enclosed to restrain loss of oil. It's a lubricator pad designed by bearing experts to give railroads the performance needed.

Get the full story on the NEW MAGNUS LUBRICATOR PAD. We will gladly send you complete information and answer any detailed questions you may have regarding its construction and operating characteristics. Write to Magnus Metal Corporation; 111 Broadway, New York 6, or 80 E. Jackson Blvd., Chicago 4, Illinois.



For Tops in Bearing Performance at Lowest Possible Cost

Magnus Solid Bearings—Are easy to maintain or replace. They can take the maximum load, make the fastest schedule. They save excess weight and have the lowest possible running resistance in pounds per ton.

Magnus R-S Journal Stops—Positively prevent excessive axle displacement during impact, braking, switching and humping. The result is better bearing performance with far lower maintenance, doubled bearing life, and reduced wheel flange wear.

Magnus Lubricator Pads—Provide a constant and uniform oil film for solid journal bearings. Three-way wicking, large oil reservoir capacity, rugged one-piece twin-lobe construction—these are three of the features that make Magnus Pads your best bet for efficient pad journal lubrication.

Subsidiary of **NATIONAL LEAD COMPANY**

IBM Report of Man Hours

Item	Code Numbers	Straight Time	Overtime	Total
Superintendence	13011	364 0		364 0
"	13012	256 0	8 0	264 0
Inspect & Repair Frt. Diesel Units - Dispatch	13112	2714 5	86 0	2800 5
" " Yard Diesel Units "	13113	1043 5	24 0	1067 5
" " Frt. Diesel Units - Form	13115	6090 0	24 0	6114 0
" " Yard Diesel Units - Form	13116	402 0		402 0
" " Frt. Diesel Units - Heavy RR	13118	186 0		186 0
" " Yard Diesel Units - Heavy RR	13119	80 0	8 0	88 0
Freight Train Cars - Repairs	13140	8 0		8 0
Work Equipment - Repairs	13260	80 0		80 0
Repairing Tools for M. of W. Dept.	44044	4 0		4 0
Operation of Power Plant	44201	1060 0	33 0	1093 0
Maintenance of Power Plant	44216	187 0		187 0
Maintenance of Way	44800	24 0		24 0
Line of Road Repairs - Freight Diesel	44803	24 0	17 0	41 0
Vacation	44997	739 0		739 0
Holiday	44998	632 0		632 0
Shop Expense	44999	1937 5	16 0	1953 5
Diesel Fuel	34002	824 0	40 0	864 0
Enginehouse Expenses - Diesel	36002	3085 0	128 0	3213 0
Transferring Freight	37305	132 0	16 0	148 0
Cleaning Freight Cars	40211	40 0		40 0
Total		19912 5	400 0	20312 5

HERE ARE the actual monthly data for one station as automatically totalled and printed by the IBM accounting machine. This report gives the basic data for computing proficiency ratings and making comparisons of each shop's performance.

(*Continued from page 23*)
units handled at each point, the man-hours per unit required for any operation can be determined easily.

This cost control system gets results. It gives the motive-power department a clear picture of how efficiently each shop or terminal is doing its job. It shows trouble spots where corrective measures are needed.

The accompanying table, listing man-hours per diesel dispatched, shows the performance of five stations. In January, Station B used 3.0 man-hours; Station E worked 7.3 man-hours to dispatch a diesel unit. These are actual data. Obviously, Station E is a trouble spot requiring investigation and corrective measures. Differences in performance may be due to factors beyond the control of local or district supervision. Bringing the station into balance with other stations doing comparable work may require action by headquarters management.

Monthly statements are furnished each shop and terminal, nevertheless. Each station is thus aware of its performance standing and, in this competitive atmosphere, the stations strive to improve.

The table showing overtime for three regions, (pages 22 and 23), indicates progress made in reducing this costly factor. When thousands of hours are involved, the more than 50 per cent improvement represents sizeable savings in operating expense. With the cost control report showing overtime hours for each operation at each station, out-of-line overtime is immediately apparent. The accounting machine data has uncovered situations producing unwarranted overtime that otherwise would have been almost impossible to detect. This is the exception rather than the rule, however; overtime has been brought into reasonable balance largely by proper distribution of manpower and work load.

The large chart (p. 27) shows the method by which the overall monthly proficiency rating of each shop can be computed. The data are for an actual shop and this chart shows the first such rating determined for this facility. In setting up the rating, it is necessary for purposes of comparison with other shops, to arbitrarily weight the operations performed. The dispatching of each diesel unit is weighted one point, heavy running repairs earn 18 points per unit, and forming locomotives (making ICC monthly inspections) is assigned 70 points per unit. Multiplying points per unit by the number of units in each category gives total points for all three operations.

This shop produced 12,517 points with

(*Continued on page 48*)

BUILT BY JOURNAL BEARING EXPERTS

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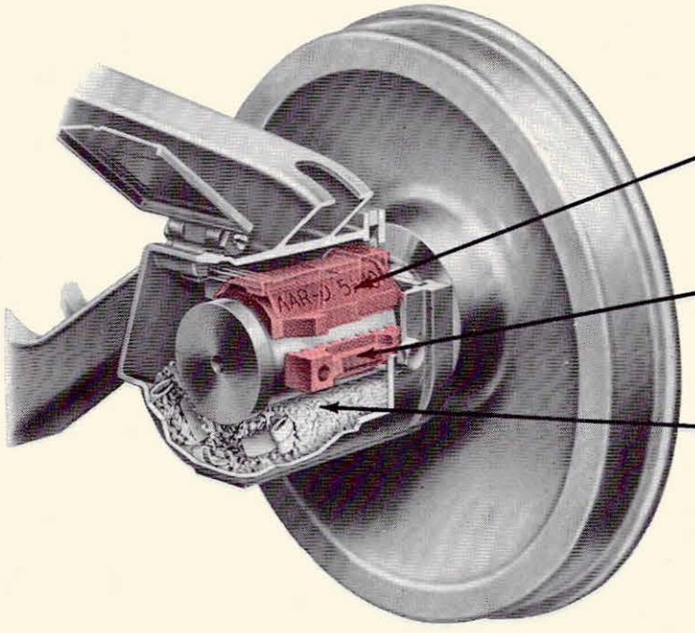

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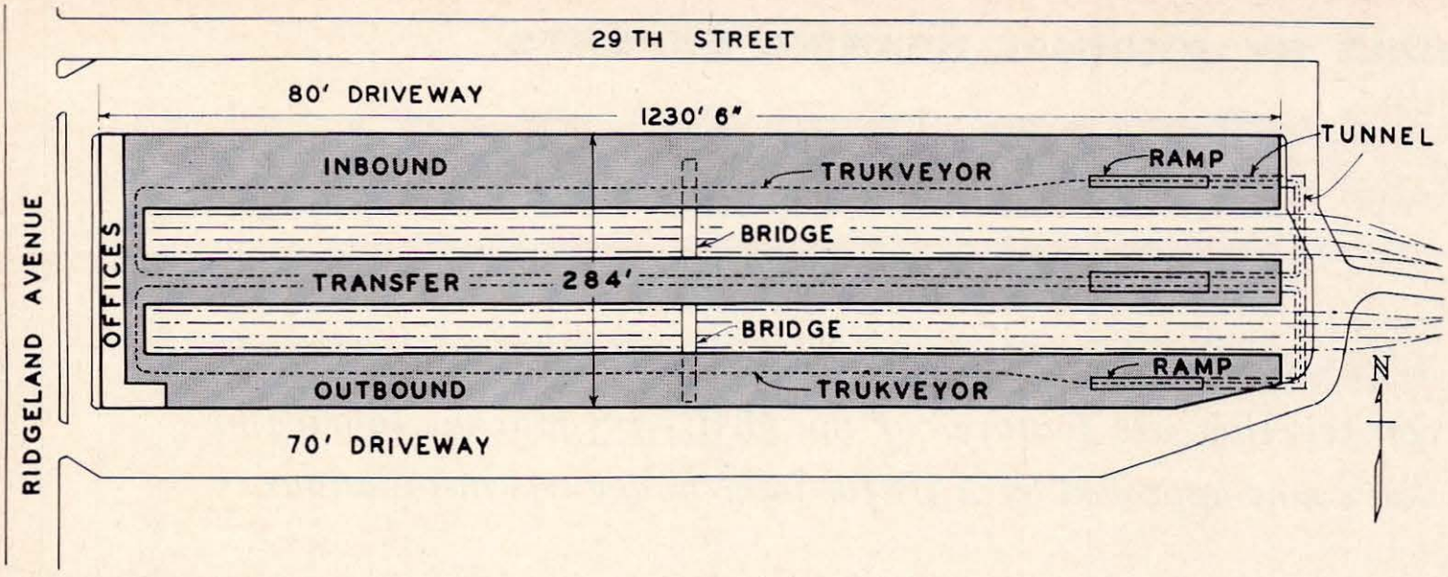
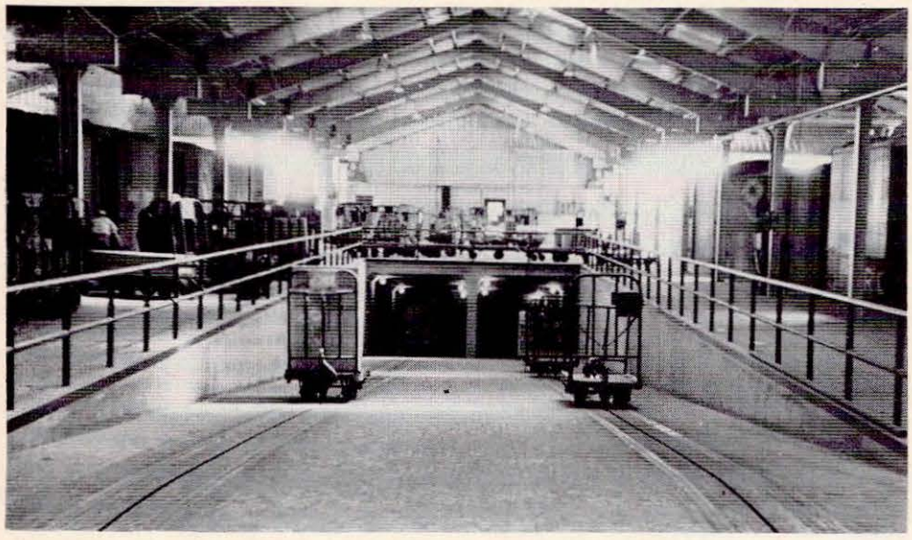


LCL BUSINESS, formerly handled at two Burlington freighthouses in downtown Chicago, will now be handled at this facility in the outskirts of the city in Berwyn, Ill. The building is the largest Butler structure ever constructed as one unit, with 350,000 sq ft of covered area. About 195,000 sq ft of it is floor space (shaded area) which provides 200 truck tailboard spottings.



EACH TOW LINE circuit connects an adjacent platform with the middle one where both lines run in the same direction to avoid accidents. This view, taken on middle platform, shows tow lines descending to tunnels under tracks.

◀ **MIDDLE PLATFORM,** although used primarily for unloading inbound cars, serves also to transfer shipments from one Trukveyor circuit to the other.

(*Continued from page 17*)

bound shipments arriving both in freight cars and highway trucks. Truck tailboard space is used primarily by Burlington Truck Lines. Certain doors are assigned for city delivery merchandise and others for outbound and interline shipments. This platform is 56 ft wide and provides 109 tailboard spots.

The middle working platform is used as a transfer medium where shipments can be directed from one car or truck to another truck or car. This platform is connected to both the north and south working platforms by two circuits of a Link-Belt Trukveyor system. Each Trukveyor circuit consists of an underfloor tow chain, 2,580 ft long, for hauling small platform trucks. One circuit runs clockwise and the other counterclockwise, so both middle-platform lines run in the same direction to avoid accidents.

An unusual feature of the two towing circuits is that they each descend by ramps at the car-switching end of the freighthouse to pass beneath the four tracks in a tunnel provided just outside the building. This feature permits the freighthouse to be switched without stopping the tow lines as would be necessary if tow chains crossed tracks at grade.

Each Trukveyor system may be stopped, in case of emergency, by any of the working personnel pulling on a pendant rope switch. These disconnect switches are spaced approximately 150 ft apart along the circuit. Through talk-back speakers, spaced 120 ft apart on the plat-

forms, the person responsible for stopping the movement reports his reasons for doing so to the head office. When the difficulty has been cleared, he then presses one of the conveniently located stop-and-start buttons to set the Trukveyor in motion again. Before it starts, however, there is a short time lag during which a warning "beep" tone alerts dock employees.

Cross bridges connect the inbound and outbound platforms at their mid-points to the middle transfer platform—the cross bridges being 52 ft long and 10 ft wide. An interesting feature of these bridges is that, when the house is to be switched, they can be lowered and then retracted beneath the platforms by push-button control to clear the tracks.

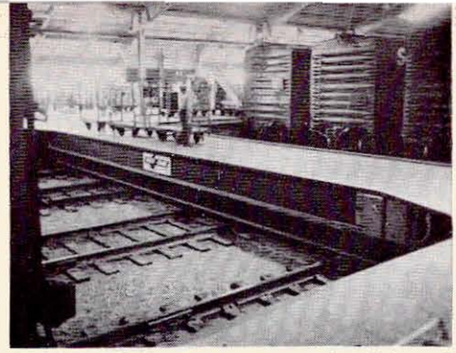
Each group of four tracks enters the house at the east end through large rocker-type aluminum doors. These are about 55 ft wide and may be opened or closed in 30 seconds by electric motors with push-button controls.

A derail on each track must be thrown before a switch engine can enter the freighthouse. A safety device, however, prevents a derail from being thrown until the movable cross bridge and the rocker-type door have both been moved into the clear. Only authorized supervisors are permitted to move the cross bridges.

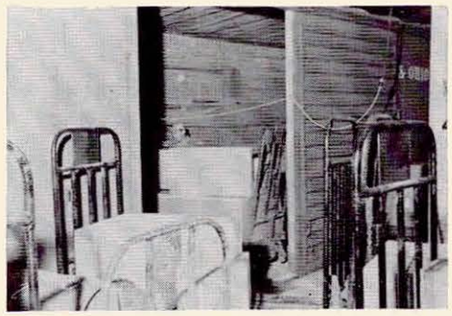
Supplementing the clear plastic roof panels are mercury-vapor lamps for lighting the inside working areas. Reel-type extension light, which can be plugged into the nearest receptacle, are available to the men working inside trucks and cars.

In addition to the talk-back speakers, the communications system includes a paging circuit and an intercom system. It also includes a pneumatic tube line to House No. 9, a mile east in Cicero yard, for handling interchange routing, bills and miscellaneous papers.

At the present time, House No. 8 is handling an average of 700 tons of lcl freight per day in two work shifts. The modern facility has resulted in faster handling than at the former congested location. Also, its proximity to the classification yard enables a later "pulling time" for cars leaving on afternoon and evening trains than was possible previously.



CROSS BRIDGES connect the inbound and outbound platforms at their midpoints to the middle platform. Cross bridges lower and retract under the platforms when switching is being done.



PLATFORM TRUCKS are taken off the tow line by chainmen at the designated run for loading into outbound cars. Portable extension lights aid the stowers.

Railroading After Hours with Jim Lynch

DINGERS, STINGERS & SNAKES—Leo V. Kelly of the Butte Anaconda & Pacific has been making inquiries about the term "dinger" for yardmaster. One old-timer told him that during a yard strike in Chicago around 1909, general yardmasters got some assistants who, for some unknown reason, were called "ding dongs"—later shortened to "dingers," and applied to yardmasters generally.

Mr. Kelly also calls attention to the designation of SUNA members as "snakes" (from their serpentine S emblem); and BRT members as "stingers" (why?). Members of the ORC were called "Big O's."

GALS WHO REALLY WORK—I read the piece about the selection and training of airline hostesses in Life magazine a couple of weeks ago. They get several weeks of vigorous schooling in their duties, before they're entrusted with handling people. No wonder they usually do such a good job.

There are a few railroad hostesses, of course—who are as decorative as those on the planes, but the difficulty about having these gals on trains is that they're additional help, and added expense. On a plane a couple of versatile girls do all the jobs that it takes a train crew, porters and dining car crew to do on a train. Which helps airlines hold down their costs, and offer attractive fares.

Incidentally, I note from the German Railways' magazine "Schöne Welt" that these railways also employ well schooled stewardesses for their dining and sleeping car services.

HOSMER MISINTERPRETED?—There continues to be a lot of talk about Examiner Hosmer's proposed report on passenger service. Most of the people doing the talking haven't read the report. They got no further than the press release which said that the railroads would probably be out of the passenger business in ten years. Mr. Hosmer said a lot more than that—he told why.

What he said could be true, of course—if government can't be induced to take vigorous steps to equalize the railroads' competitive situation. Mr. Hosmer did a fine job of turning the spotlight on governmental efforts to derail passenger movement by rail.

A PRIVATE RAILROAD?—I have a letter from an engineer named John G. Kneiling who says he has a project afoot to get control of a railroad, and convert it into a private carrier—which would do nothing but haul trailers and containers (largely as an agent for rail and highway common carriers). By handling nothing but units nearly uniform in size, this carrier (Mr. K. believes) would do a mass job, by mechanized, repetitive processes—and provide no collection or delivery beyond its stations.

Such an operation, Mr. K. says, by permitting maximum use of mass-handling techniques, should show costs less, even, than those of water carriers.

An interesting idea—but I'd guess it'd take some able lawyers (in addition to technicians and financiers) to work it out. Surely, it's high-quality mass-produced continuous movement that should be the railroads' goal.

How New Controls Help the

The road's new cost-control system, inaugurated late last year, is now applied only to locomotive units. Plans call for extending its benefits to the control of car and material costs.

INSPECTING THE IBM accounting machine which automatically produces the report are B&O's F. B. Rykoskey (center), general superintendent motive power and equipment, flanked on his left by W. A. Mullen, superintendent methods and procedures, and on his right by J. J. Luddy, assistant comptroller-disbursements.

SUPERVISOR EXPLAINS to workman the type of repairs this diesel unit is getting. Code number is indicated by metal tag attached to front handhold.

Accurate cost information is helping the B&O's motive power and equipment department wage a winning battle of cost control.

Full benefits of the new system haven't yet been attained. The accompanying tables show the progress being made after only about one year. The new setup has helped the road reduce overtime 50 per cent, cut man-hours per diesel dispatched by 20 per cent, and save more than 12 per cent in units formed (ICC monthly inspections).

The cost control system was inaugurated late in 1957. At that time the B&O accounting department made a system-wide installation of IBM punch-card machines. The mechanical department saw the opportunity: use the equipment to get needed information for an efficient cost control system. Formerly, without such equipment, it had been impossible to obtain accurate data quickly on the thousands of mechanical department employees scattered at many points along the railroad.

Today, each operation is assigned a code number. The same number is used for like operations at every shop and terminal on the system. Study of the "IBM Report of Man-Hours" table shows code numbers for the several accounts tabulated. For example, code No. 13011 is assigned to "Superintendence," No. 13112 to inspection and repair of diesel freight units in dispatching.

The three middle digits of the code numbers are also ICC accounting classifications—i.e., account 301 is the ICC number for superintendence, 311 the number assigned to diesel repairs.

Employees performing these operations show on their time cards the assigned

LOCATION
Region - A
Region - B
Region - C

B&O Trim Motive Power Costs

code number and hours expended on each operation. Bulletin boards at shops and terminals list code numbers for each job. A tag with the correct code number is also attached to the diesel unit on which work is being performed.

Training employees to list correct code numbers and hours on time cards took a few months. For this reason, the cost control system did not reach its maximum efficiency until early this year.

For employees regularly assigned to a specific job, time cards are pre-punched for the code number assigned to that operation. For example, a man regularly doing inspection and repair of diesel freight units for dispatching would have his card punched for code No. 13112. If he spends his entire day on this work, he merely lists eight hours and 13112 in the proper columns on his card.

Such a card is ready for the accounting machine without change. On the other hand, this man might only spend four hours on 13112 and his other four hours on heavy running repairs to diesel freight units (code No. 13118). In this case, he would note both the number of hours and the code numbers on his card. The accounting department, by inspection, would note the change and mark his card so the accounting machine would distribute four hours to each code number.

At the end of each month, time cards from each shop and terminal are processed through accounting department offices at Baltimore, Pittsburgh, or Cincinnati. The "IBM Report of Man-Hours" for each station or shop is produced automatically. All reports are sent to motive-power headquarters at Baltimore. There, knowing the number of

(Continued on page 26)

Man Hours Per Diesel Unit Formed (ICC)

Station	YEAR 1958					
	Jan	Feb	Mar	Apr	May	June
A	97.9	83.3	77.3	76.7	82.3	86.3
B	113.2	104.6	93.6	96.1	90.6	97.7
C	81.1	70.4	72.6	57.9	60.9	66.9
D	85.5	91.4	56.5	45.0	67.3	71.2
E	71.7	77.0	60.2	68.3	63.1	70.3

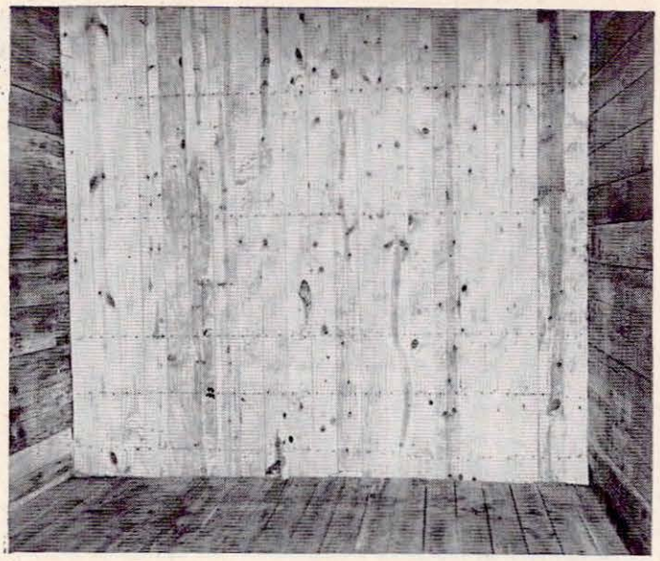
Man Hours Per Diesel Unit Dispatched

Station	YEAR 1958					
	Jan	Feb	Mar	Apr	May	June
A	3.4	3.0	2.7	3.9	2.9	2.8
B	3.0	2.9	2.9	2.7	2.6	2.8
C	4.7	4.6	4.4	3.4	3.2	3.9
D	4.1	4.2	4.2	4.1	3.9	3.8
E	7.3	7.5	6.0	4.2	4.6	4.3

RESULTS OBTAINED by the cost control system are shown by the three tables on these pages. From the monthly "I.B.M. Report of Man-Hours" for each shop, and knowing the number of diesel units handled, the man-hours per diesel unit required for each operation are determined. Overtime hours for each operation and total overtime are also compiled for each point. Trouble spots are pin-pointed and receive corrective treatment.

Overtime Record in Baltimore & Ohio's New Cost-Control System

APRIL - 1958 MAN HOURS				MAY - 1958 MAN HOURS				JUNE - 1958 MAN HOURS			
STRAIGHT TIME	OVERTIME	TOTAL	%	STRAIGHT TIME	OVERTIME	TOTAL	%	STRAIGHT TIME	OVERTIME	TOTAL	%
287519.0	18133.2	305652.2	6.3	352934.6	17421.4	370356.0	4.9	393387.0	13521.7	406908.7	3.4
237845.0	15562.2	253407.2	6.5	210089.5	11256.3	221345.8	5.4	229796.1	5895.6	235691.7	2.6
84366.8	6548.0	90914.8	7.8	123903.1	8079.9	131983.0	6.5	205896.0	6721.0	212617.0	3.3



Here is before-and-after evidence of the results you get with ADM Freight Liner 810 in boxcars.

On the Norfolk and Western

1,968 Cars readied for Tobacco, Flour, Paper, Feed, Grain

loading with **ADM** *Freight Liner 810*

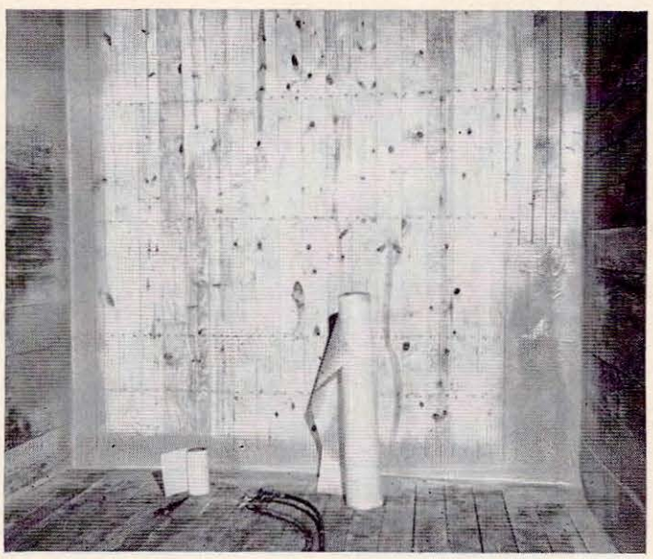
The Norfolk and Western Railway Company began coopering cars with Freight Liner 810 two years ago. The ADM system was found so satisfactory that the line has since Freight-Lined 1,968 cars for shipment of such commodities as paper, flour, tobacco, feed and grain. Today, the N & W uses ADM Freight Liner 810 at five points along its line.

Like so many roads, the Norfolk and Western finds Freight Liner ideal when sealed, smooth interiors are a must. The plastic-and-fiberglass treatment seals rough or broken walls and corners with a smooth, tough surface that is moisture-proof and easy to clean. Of special interest is its ability to seal grease and oil stains, allowing cars to be used for easily-contaminated ladings.

The Pure Food and Drug Administration approves ADM Freight Liner 810 for shipment and storage of foodstuffs.

Freight Liner is popular for other reasons, too. Railroads appreciate its economy, versatility, and ease of application. With a little practice, two men can repair 30 cars a day, patching, relining, and resurfacing. And in most cases, cars can be loaded within three hours after relining.

ADM technical service personnel will be happy to show you how Freight Liner can solve your high-grade loading problems. For a demonstration on your cars at any location, write, wire, or phone ADM Freight Liner System, Archer-Daniels-Midland Company, 732 Investors Building, Minneapolis 2, Minn. (FEderal 3-2112)

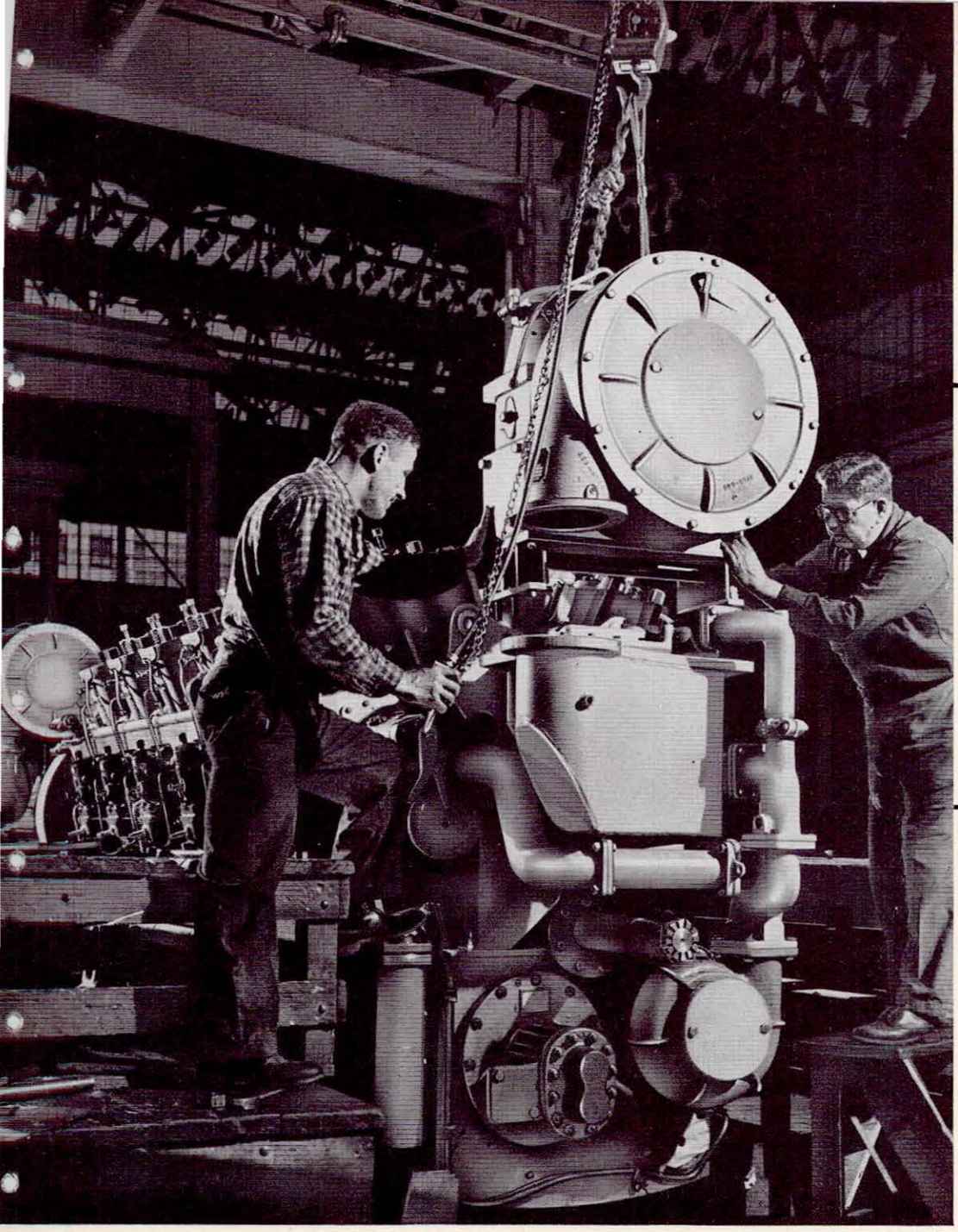


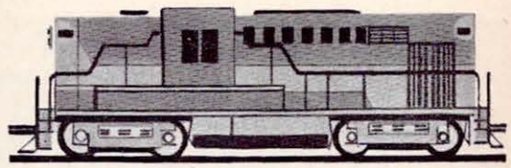
Finished job dries in minutes, provides a smooth, tight interior with top-notch sanitary protection.

Archer-Daniels-Midland

732 INVESTORS BUILDING, MINNEAPOLIS 2, MINN.

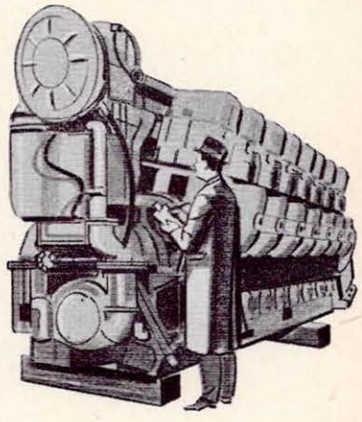
ADM PRODUCTS: Linseed, Soybean and Marine Oils, Paint Vehicles, Synthetic and Natural Resins, Fatty Acids and Alcohols, Vinyl Plasticizers, Hydrogenated Glycerides, Sperm Oil, Foundry Binders, Bentonite, Industrial Cereals, Vegetable Proteins, Wheat Flour, Dehydrated Alfalfa, Livestock and Poultry Feeds, Olefins and Hydrocarbons.





LOCOMOTIVE

PARTS



SERVICE

For added power and increased fuel efficiency, the ALCO turbo-supercharger is installed on each ALCO engine in the 900-2400 hp range.

A BIG POWER BONUS is added to every ALCO diesel engine with turbosupercharging. ALCO first introduced the diesel turbocharger in 1936. Today ALCO is the only manufacturer building both engines and turbochargers as matched components for better motive-power performance. ALCO's new turbocharged Model 251 engine has proved in more than 60 million miles of locomotive use that it combines added power with the low-cost operation that today's railroading requires. Since 1848, ALCO has been serving the needs of American railroads.

ALCO

ALCO PRODUCTS, INC.
TRANSPORTATION PRODUCTS DIVISION
SCHENECTADY, NEW YORK

DIESEL-ELECTRIC LOCOMOTIVES • DIESEL ENGINES • RENEWAL AND MODERNIZATION PARTS • REPAIR AND REBUILD SERVICES

IBM Report of Man Hours

Item	Code Numbers	Straight Time	Overtime	Total
Superintendence	13011	364 0		364 0
"	13012	256 0	8 0	264 0
Inspect & Repair Frt. Diesel Units - Dispatch	13112	2714 5	86 0	2800 5
" " Yard Diesel Units "	13113	1043 5	24 0	1067 5
" " Frt. Diesel Units - Form	13115	6090 0	24 0	6114 0
" " Yard Diesel Units - Form	13116	402 0		402 0
" " Frt. Diesel Units - Heavy RR	13118	186 0		186 0
" " Yard Diesel Units - Heavy RR	13119	80 0	8 0	88 0
Freight Train Cars - Repairs	13140	8 0		8 0
Work Equipment - Repairs	13260	80 0		80 0
Repairing Tools for M. of W. Dept.	44044	4 0		4 0
Operation of Power Plant	44201	1060 0	33 0	1093 0
Maintenance of Power Plant	44216	187 0		187 0
Maintenance of Way	44800	24 0		24 0
Line of Road Repairs - Freight Diesel	44803	24 0	17 0	41 0
Vacation	44997	739 0		739 0
Holiday	44998	632 0		632 0
Shop Expense	44999	1937 5	16 0	1953 5
Diesel Fuel	34002	824 0	40 0	864 0
Enginehouse Expenses - Diesel	36002	3085 0	128 0	3213 0
Transferring Freight	37305	132 0	16 0	148 0
Cleaning Freight Cars	40211	40 0		40 0
Total		19912 5	400 0	20312 5

HERE ARE the actual monthly data for one station as automatically totalled and printed by the IBM accounting machine. This report gives the basic data for computing proficiency ratings and making comparisons of each shop's performance.

(*Continued from page 23*)
units handled at each point, the man-hours per unit required for any operation can be determined easily.

This cost control system gets results. It gives the motive-power department a clear picture of how efficiently each shop or terminal is doing its job. It shows trouble spots where corrective measures are needed.

The accompanying table, listing man-hours per diesel dispatched, shows the performance of five stations. In January, Station B used 3.0 man-hours; Station E worked 7.3 man-hours to dispatch a diesel unit. These are actual data. Obviously, Station E is a trouble spot requiring investigation and corrective measures. Differences in performance may be due to factors beyond the control of local or district supervision. Bringing the station into balance with other stations doing comparable work may require action by headquarters management.

Monthly statements are furnished each shop and terminal, nevertheless. Each station is thus aware of its performance standing and, in this competitive atmosphere, the stations strive to improve.

The table showing overtime for three regions, (pages 22 and 23), indicates progress made in reducing this costly factor. When thousands of hours are involved, the more than 50 per cent improvement represents sizeable savings in operating expense. With the cost control report showing overtime hours for each operation at each station, out-of-line overtime is immediately apparent. The accounting machine data has uncovered situations producing unwarranted overtime that otherwise would have been almost impossible to detect. This is the exception rather than the rule, however; overtime has been brought into reasonable balance largely by proper distribution of manpower and work load.

The large chart (p. 27) shows the method by which the overall monthly proficiency rating of each shop can be computed. The data are for an actual shop and this chart shows the first such rating determined for this facility. In setting up the rating, it is necessary for purposes of comparison with other shops, to arbitrarily weight the operations performed. The dispatching of each diesel unit is weighted one point, heavy running repairs earn 18 points per unit, and forming locomotives (making ICC monthly inspections) is assigned 70 points per unit. Multiplying points per unit by the number of units in each category gives total points for all three operations.

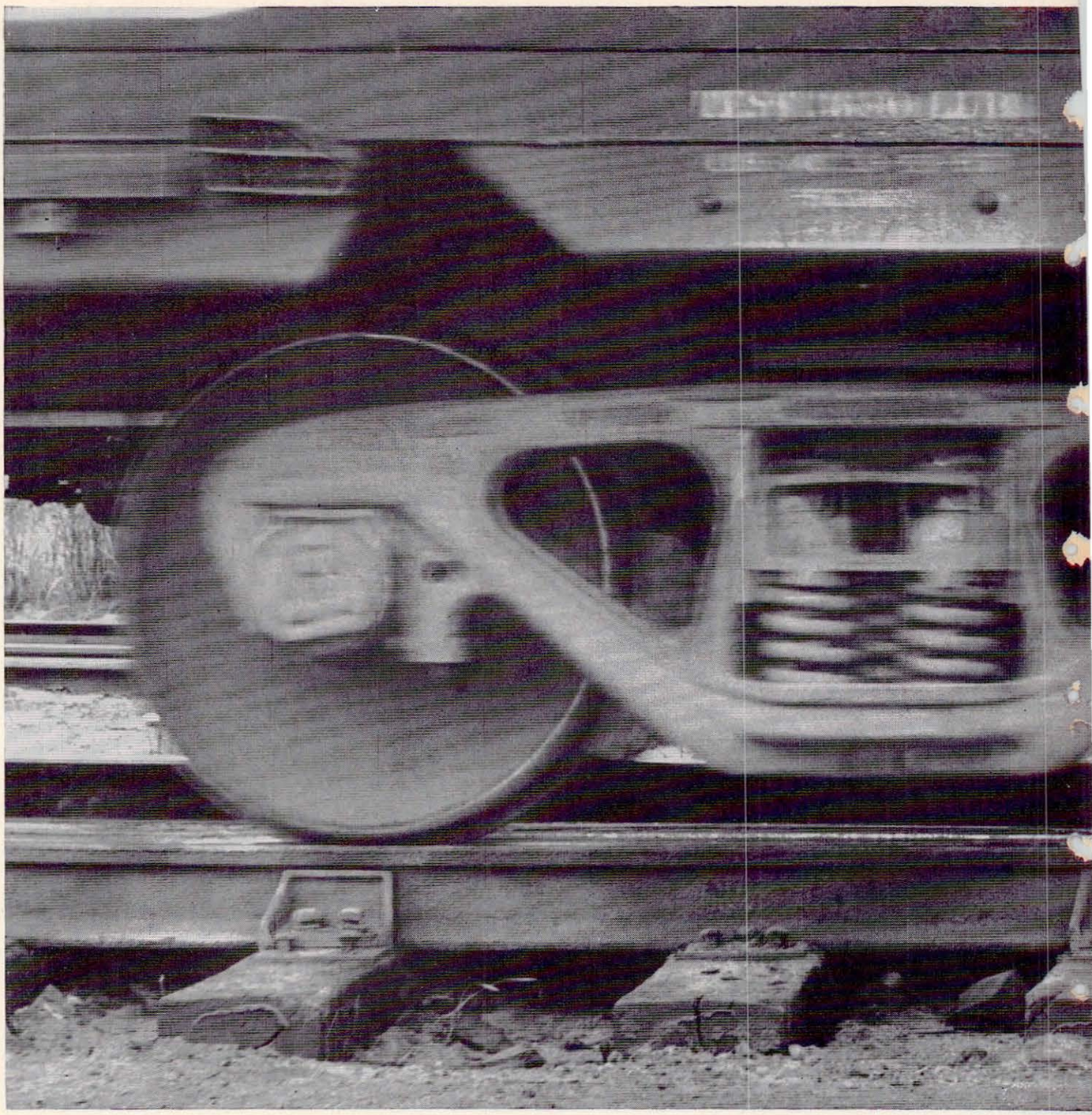
This shop produced 12,517 points with

(*Continued on page 48*)

Monthly Proficiency Rating for One Baltimore & Ohio Shop

Line No.	Job No.	Description of Operation	Total Man-Hours	No. Units	Man-Hours per Unit (D) ÷ (E)	Points per Unit	Total Points (E) x (G)	Total Points per Man (H)÷L-36	BUDGET		
									Points per Man per Unit	Total Points per Man (K) x (E)	Per cent Proficiency (J) ÷ (L)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)	(L)	(M)
		Dispatching Locomotives Inspect and Repair:									
L- 1	13081	Steam Locomotives									
L- 2	13111	Passenger Diesel Locos.	643.3	464	1.39	1	464				
L- 3	13112	Freight Diesel Locos.	2685.8	1781	1.51	1	1781				
L- 4	13113	Yard Diesel Locos.	395.0	94	4.20	1	94				
		Heavy Running Repairs To Locos. (Requiring More Than Four Hours Work Inspect and Repair:									
L- 5	13083	Steam Locomotives									
L- 6	13117	Passenger Diesel Locos.	39.0	3	13.00	18	54				
L- 7	13118	Freight Diesel Locos.	1567.5	49	31.99	18	882				
L- 8	13119	Yard Diesel Locos.	8.0	4	2.00	18	72				
		Total Dispatchments Inspect and Heavy Running Repairs									
L- 9	-	Steam Locomotives									
L-10	-	Passenger Diesel Locos.	682.3	467	1.46		518				
L-11	-	Freight Diesel Locos.	4253.3	1830	2.32		2663				
L-12	-	Yard Diesel Locos.	403.0	98	4.11		166				
		Forming Locomotives Inspect and Repair:									
L-13	13082	Steam Locomotives									
L-14	13114	Passenger Diesel Locos.	235.0	5	47.00	70	350				
L-15	13115	Freight Diesel Locos.	19841.6	119	166.74	70	8330				
L-16	13116	Yard Diesel Locos.	65.0	7	9.29	70	490				
L-17		Total L-9 to L-16 inc.	25480.2	2526	10.09		12517				
		Supporting Operations									
L-18		Acct. 301, Superintendence	1397.0								
L-19		Acct. 302, Repairs Shop Mach.	72.0								
L-20		Acct. 304, Repairs P.P. Mach.	-								
L-21		Accident Repairs - Locos.	-								
L-22		Class Repairs to Locos.	-								
L-23		Budd Cars - Inspect and Repair	-								
L-24		Repairs - Work Equipment	7.0								
L-25		Shop Orders - Miscellaneous	3085.5								
L-26		Repairs - Freight Cars	14.5								
L-27		Shop Expense	5266.2								
L-28		C T Expense	7291.0								
L-29		Clearing Wrecks	-								
L-30		Vacation and Holidays	4527.0								
L-31		Totals L-18 to L-30 inc.	21660.2	2526	8.57						
L-32		Grand Total L-17 + L-31	47140.4	2526	18.66		12517	48.5	.024	61.0	79.5
		Force									
L-33		Standard	283								
L-34		Over Standard	-								
L-35		Under Standard	25								
L-36		Actual	258								
L-37		Non Productive	31								
L-38		Total Points Per Man Col. H L-32 / L-36									

B&O MOTIVE-POWER HEADQUARTERS compiles overall proficiency rating for each shop. Assignment of points to each operation permits comparisons between shops, tells how well each is doing its job. Above are June 1958 data from one shop.



Where payloads roll on roller bearings . . . Gulf makes things run better!

NEW GULFCROWN R.R.

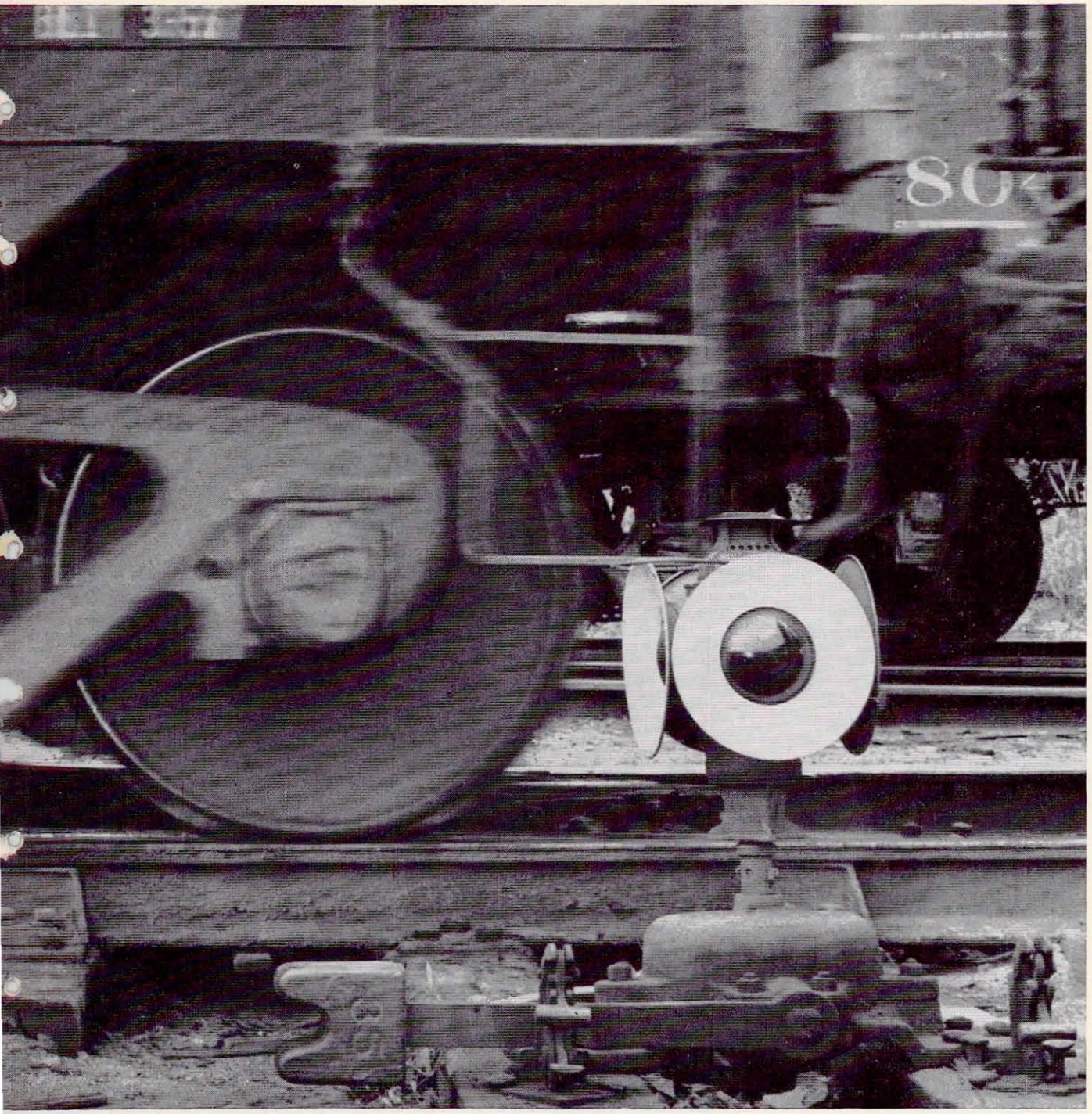
New Gulfcrown R.R. is a lithium base grease especially developed to provide better lubrication for railroad car roller bearing journals. It has been tested and approved against A.A.R. Specification No. M-917-56.

Stands up at high temperatures. New Gulfcrown R.R. has been used successfully in bearings operating at temperatures as high as 250° F.

Pumps freely at low temperatures. Gulfcrown R.R. Grease doesn't become hard, or unworkable, even when subjected to temperatures as low as 0° F.

Won't thin out at high speeds. Its excellent mechanical stability keeps Gulfcrown R.R. from thinning out under the churning action of high speed bearings.

Resists washing action of water. Won't wash away even under wettest conditions. Gulfcrown R. R. also provides protection against rust.



GREASE

Excellent oxidation stability. New Gulfcrown R. R. Grease is effectively inhibited against oxidation to insure long life, both in storage and in use.

Gulfcrown R.R. Grease is available now, in 35 lb. pails, 100 lb. drums and 400 lb. drums. Let us prove that you will get more effective roller bearing protection—and reduced maintenance costs—with this outstanding new grease. Write or phone.

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Pittsburgh 30, Pa.

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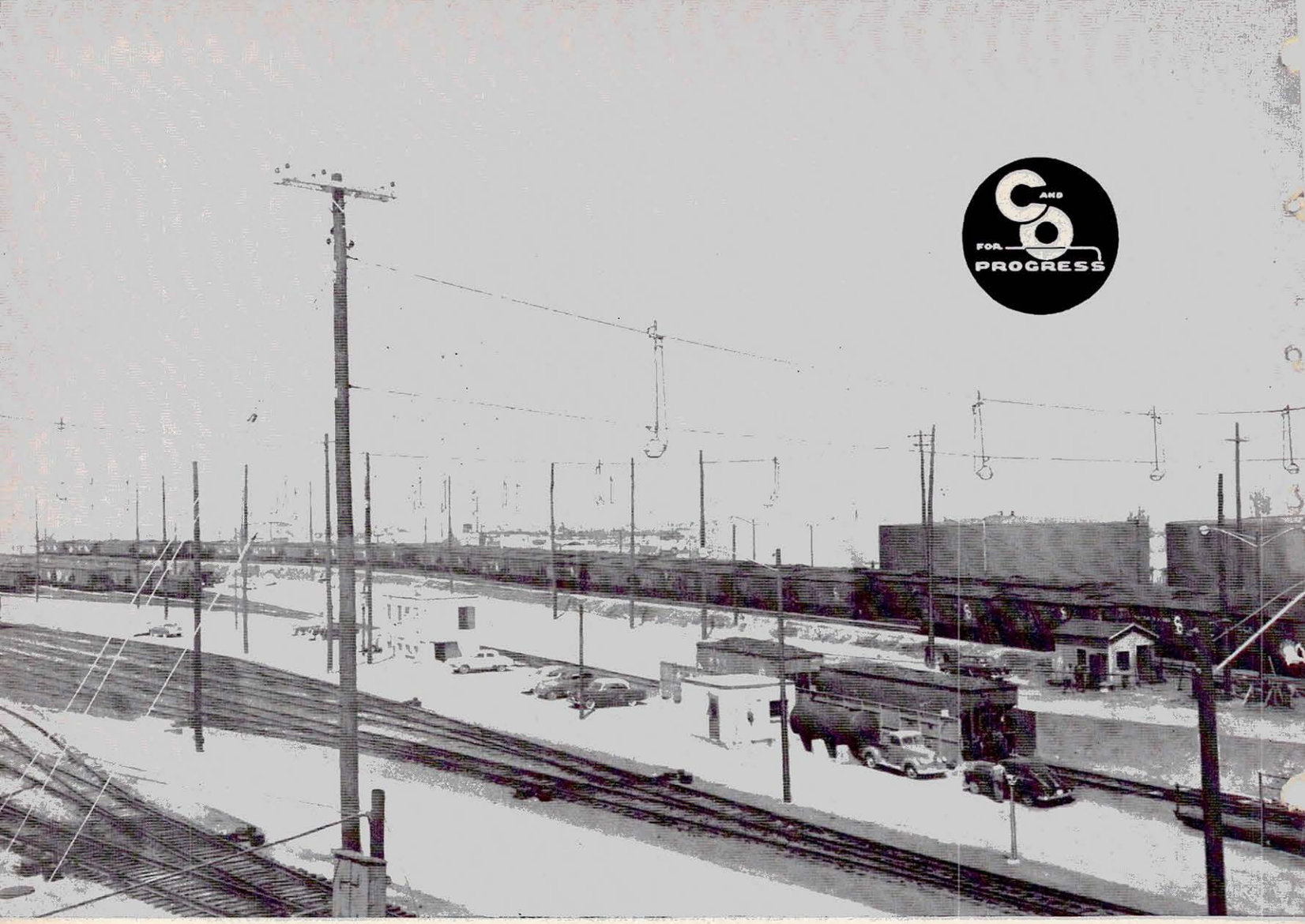
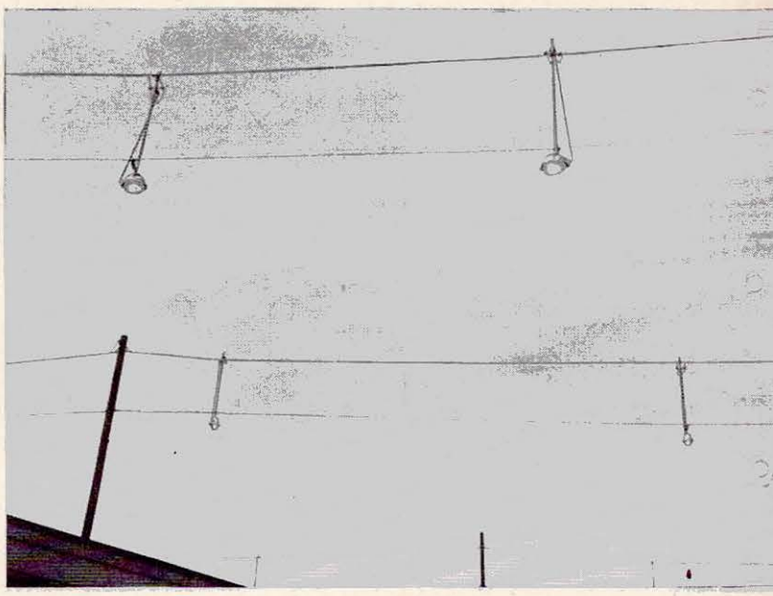


DAYTIME VIEW showing the extensive yards and coal-handling facilities the C&O recently completed near Pier 15, Newport News, Va. Here up to 2,000 tons of coal per hour can be loaded, with 24-hour operation made possible by the illumination provided by 135 Line Material high-intensity mercury vapor luminaires.

CARS APPROACHING THE COAL DUMPER. Here higher than average intensity is provided by mounting the mercury vapor lights at a 30-foot height on single or double mast arms and poles. Photoelectric controls automatically turn on the lights whenever natural lighting drops below 1.0 footcandle.



TO PROVIDE even, glare- and shadow-free illumination, luminaires are hung on this catenary system. Cables up to 300 feet long support from two to five luminaires, are spaced at 100 to 200-foot intervals. Power is supplied by an L-M Uni-Ballast constant-current series system operating at 100% power factor.

LM
LINE MATERIAL Industries
McGRAW-EDISON COMPANY

NIGHT VIEW of the C&O Newport News yards, showing L-M high-intensity mercury vapor lights mounted on poles and supports for top illumination near the coal dumper. Lights in the background are mounted on the unusual catenary system devised by L-M engineers in cooperation with C&O engineers.

L-M Lights Turn Night Into Day At C & O Newport News Coal Yards

The new multi-million-dollar coal-handling facilities of the Chesapeake & Ohio Railway at Newport News, Va., can transfer coal into ships at 2,000 tons per hour, 24 hours per day. The new coal-handling installation has many unique and outstanding features, including excellent mercury vapor lighting.

Good visibility is essential in the operation. Light from ½ to 1½ footcandles is provided by 135 L-M high-intensity mercury vapor luminaires. Of these, 42 are on conventional supports and poles at a 30-foot mounting height, to provide high-level lighting around barney pit, coal dumper, and the coal pier. The other 93 are mounted at 40-foot height on an unusual catenary suspension system.

This system provides controlled distribution of light, minimum glare, elimination of sharp shadows, and excellent visibility for tower operators. The L-M units use a 7,000-hour lamp with a light output of 21,000 lumens. Refracting glassware provides even light distribution from the 40-foot mounting height used above the railroad yards.

Power is provided through an L-M exclusive Uni-Ballast system, a constant-current series circuit that cuts costs because it operates at high efficiency and 100% power factor. Control is by photoelectric cells which automatically turn on all lights whenever the natural light level falls below 1.0 footcandle. Thus heavy clouds or nightfall do not even momentarily hinder the continuous operation of the extensive car- and coal-handling facilities.

Ask About L-M Lighting Application Engineering

Railway yard lighting is unusual. Each job must be individually engineered. As a leader in yard lighting, Line Material has the experience, the engineering ability, and the manpower to do outstanding work in railway yard lighting.

L-M provides a complete line of outdoor lighting equipment —incandescent, mercury vapor, and fluorescent—and outstanding lighting engineering service. For complete information ask the L-M man; call the nearest L-M office; or phone or write Lighting Division, Line Material Industries, Milwaukee 1, Wisconsin. In Canada: Canadian Line Materials, Ltd., Toronto 13, Ontario.

Outdoor Lighting

McGRAW-EDISON

335

DISTRIBUTION TRANSFORMERS • KYLE RECLOSERS AND OIL SWITCHES • FUSE CUTOUTS AND FUSE LINKS • LIGHTNING ARRESTERS • POWER SWITCHING EQUIPMENT
PACKAGED SUBSTATIONS • CAPACITORS • REGULATORS • OUTDOOR LIGHTING • LINE CONSTRUCTION MATERIALS • PORCELAIN INSULATORS • FIBRE PIPE AND CONDUIT

Current Railroad Questions

Can We Improve Methods of Evaluating Operating Efficiency?

In our July 21 and August 11 columns, we quoted from a report of a committee of the American Association of Railroad Superintendents on this subject and printed the letter referred to on scatter diagrams. Here are another reader's thoughts on this important question of pinpointing and reporting costs . . . *G.C.R.*

"I was very much interested in the letter of Walter B. Wright of the Chesapeake & Ohio in the August 11 issue, concerning the use of scatter diagrams. Scatter diagrams are very useful in attempting to determine the existence of a relationship between various input and output variables. However, there is the danger that they are often too simplified for the problem involved. In other words, the dependent variable often can not be explained by one independent variable in a simple scatter diagram, but rather is dependent on several variables.

"For example, the scatter diagram relates yard engine hours to cars handled. Obviously the regression line shown is an average line; only two points fall exactly on the regression line. Only on two of the days in question were yard engine hours related directly to cars handled according to the average. Why? Either because there were errors in measuring the input and output units (yard engine hours and cars handled, respectively) or because the number of yard engine hours depended on other variables besides the number of cars handled. Yard engine hours might conceivably be more related to the number of 'cuts' of cars handled rather than to the number of individual cars handled. Also, the relationship will be different where a given number of trains are entering the yard at evenly spaced intervals rather than where the same number of trains will enter the yard, but in bunches. The type of traffic might further influence the relationship.

"Though there are limitations to scatter diagrams, they are very useful in determining whether approximate relationships exist. Simple, two-variable scatter diagrams were used extensively in the detailed California Railroad Commission *Study of Rail Cost Finding for Rate Making Purposes* of 1938 and also in the Interstate Commerce Commission *Explanation of Rail Cost Finding Procedures and Principles Relating to the Use of Costs* of 1948. Both of these studies analyzed the problems of determining the variability of various input units with output units.

"As noted above, often the two-variable scatter diagram is too simple for the analysis of complex problems involved in relating input to output. This is due to the fact that inputs and outputs are often not clear-cut and are difficult to define. The relationship between yard engine hours and cars handled, for example, depends on the lengths of the cuts of cars handled, which may be highly variable in itself. Modern multiple regression and correlation techniques, however, offer great hope in dealing with complex problems of this type in that many variables can be handled at once and interdependent relationships determined. This is especially true with the advancement made in the design of electronic computational and processing equipment, which makes it possible to handle complex problems that were previously uneconomical and extremely difficult to handle by more simple calculation equipment.

"If the railroads are really interested in improving their operating efficiencies, I think there are great possibilities for doing so by using the technique presented by Mr. Wright and by doing some live-wire research into the possibilities of using modern statistical techniques with electronic data processing equipment.

"I definitely believe that it would be possible to develop successful statistical models of various railroad operating functions which, coupled with electronic data processing equipment and good traffic forecasting techniques, would enable railroads to adjust their facilities much more flexibly to traffic requirements and would facilitate the control of costs.

"For those who are mathematically and statistically inclined, there is a short and interesting presentation of the results of a study by G. H. Borts entitled "Production Relations in the Railway Industry" (*Econometrica*, 1952, p. 71). Borts made a multiple regression study of the variability of railroad inputs with output for the railroad industry of the United States in 1948. Also, there is a recent book entitled *Studies in the Economics of Transportation* (Martin Beckmann, et al, New Haven: Yale University Press, 1956) in which part of the study is devoted to the possibilities of using statistical techniques in evaluating the efficiencies of railroad functions.

"It is my belief that if a little money and effort were spent toward research in the *use* of statistics by the railroad industry, more efficient, lower cost and higher quality railroad transportation would be the reward."—*William L. Paul, engineering department, Atchison, Topeka & Santa Fe.*

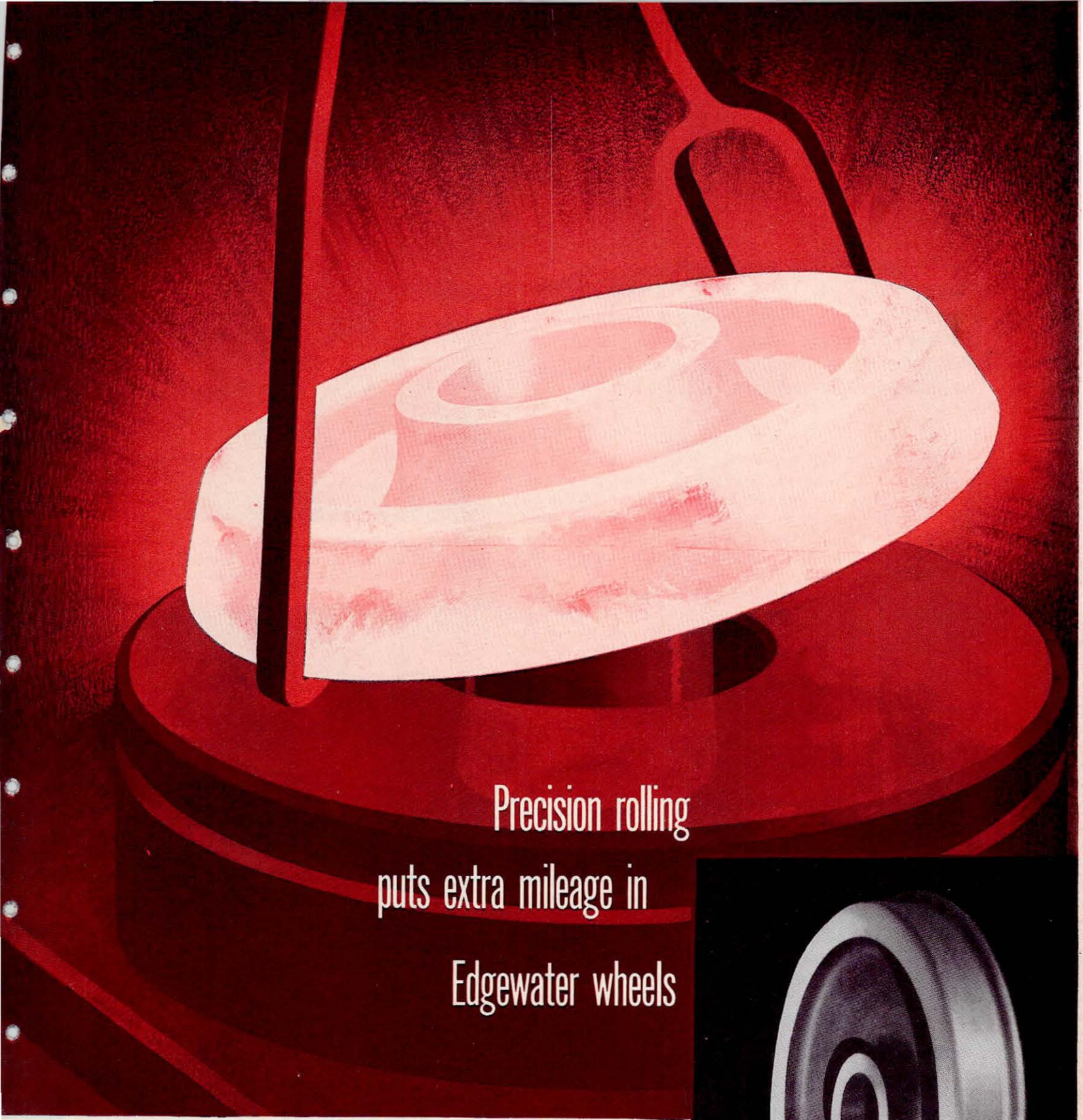
•

Future columns will contain more answers to the question discussed on Aug. 25 and Sept. 15, "To what extent can piggyback replace branch line operations?"

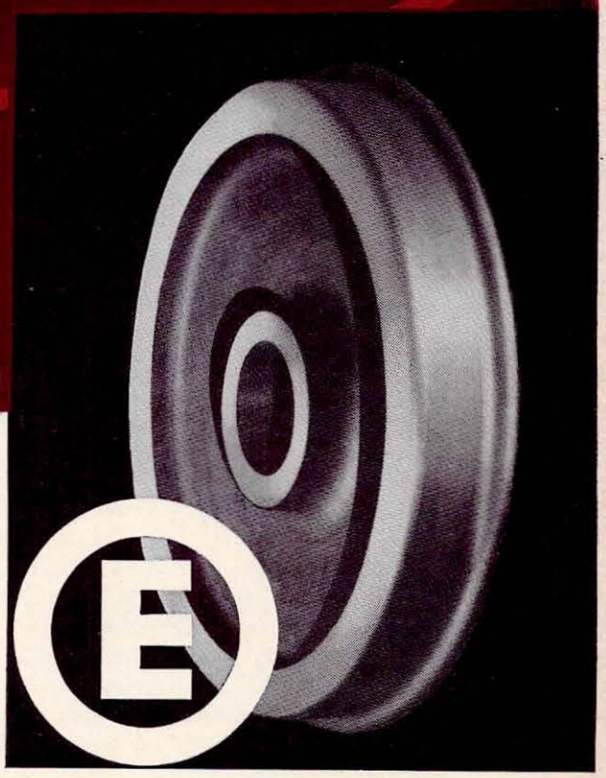
There will also be further discussion of the question whether rail traffic men work at a disadvantage in selling rail shipments because time allowed for payment of rail freight bills is shorter than time for payment of motor carrier freight. This subject was introduced in the column of September 29, in connection with the incorporation in Railway Age of special traffic material formerly carried in Railway Freight Traffic.

Another question in the works concerns the possibility of fighting damage losses by a new no-claim rate . . . *G.C.R.*

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in frequent weekly issues of this paper and is devoted to authoritative answers to questions of interest to railroaders at all levels of responsibility. Readers are invited to submit questions, and when so inclined, letters agreeing or disagreeing with our answers. We will pay $10 for questions suggested by readers, which are used in this column. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.



Precision rolling puts extra mileage in Edgewater wheels



The forged wheel blank shown above is about to be rolled and expanded to final rim contour and size on the Edgewater Wheel Rolling Mill—the most powerful mill of its kind in the world. The rolling process, plus advanced metallurgical techniques account for the extra mileage of Edgewater Wheels.

Edgewater Steel Company

P. O. BOX 478, PITTSBURGH 30, PENNA.

GEARED TO PROGRESS
P R I
MEMBER

New York Central's Flexi-Van

Here's the Flexi-Van story from the shipper's point of view. Sunshine Biscuits, Inc., began using Flexi-Van when service was opened in April, has been using it regularly ever since. For this story, we took a picture sequence of a Sunshine shipment; they supplied the commentary.

New York Central Transport Company, highway subsidiary of New York Central, put its first Flexi-Vans in service April 16 (RA, April 28, p. 18). Operations began with 10 cars. Additional equipment has been delivered regularly in the interval since, and most of the original order of 450 vans, 150 special flat cars, and 150 bogies (the wheel units that added make the vans into highway trailers) is now on hand.

Flexi-Van business has grown steadily since opening day. June showed a 40 per cent increase over May, the first full month of operations. July beat June by 45 per cent. August, in turn, was 85 per cent better than July, and September figures are expected to be 85 to 100 per cent better than August. Business is good, to the point that it is crowding the capacity of NYC Transport tractors. More tractor units are on order.

New York Central President A. E. Perlman gave his reaction to Flexi-Van at a recent luncheon of New York security analysts: The road likes it, Mr. Perlman said. "It's bringing new business to us daily."

Interchange Problem Is Being Solved

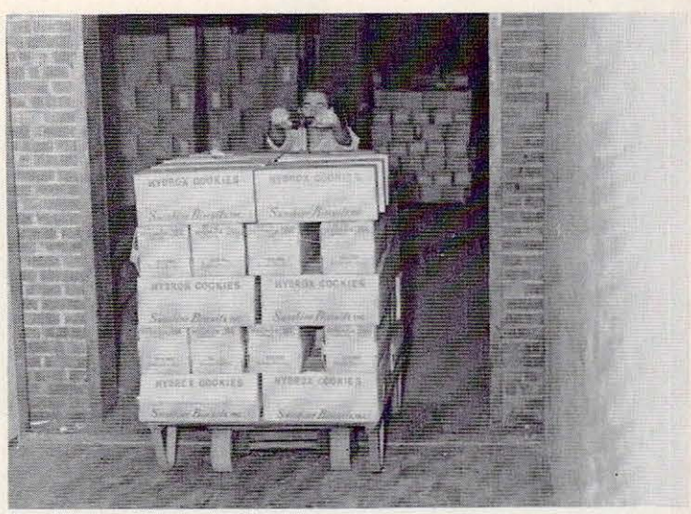
Flexi-Van is still new enough to have growing pains—one of the biggest of which is interchange with other roads for shipments beyond New York Central territory. This problem is being solved by expansion of Flexi-Van to other roads. Burlington Lines have purchased 100 Flexi-Vans, which they are using in substituted service and—with wheel units added—as conventional, tie-down piggyback cars. The Milwaukee is planning to establish interchange service November 15 with a $1,022,000 equipment order comprising 26 flat cars, 75 vans and 40 bogies (RA, Oct. 6, p. 38). Additional connections for Flexi-Van interchange are being negotiated with two southern roads, Mr. Perlman said in September.

Flexi-Van interests forwarders, too. A large trucker who also owns freight forwarder operating rights has purchased 15 special Flexi-Van cars to take advantage of Plan 3 piggyback rates and is acquiring vans to go with them.

New York Central, meanwhile, has extended service to additional on-line locations as more equipment has become available. Starting on the New York-Chicago route in April, the service expanded to Albany-Troy-Schenectady and Kankakee-Joliet in June; Boston, Syracuse and St. Louis in July, and Detroit, Cleveland, Rochester and Springfield, Mass., in September.

Extensions to Toledo, Indianapolis, Louisville, Cincinnati, Columbus, Buffalo, Pittsburgh and Worcester, scheduled for November, will blanket the system. When that happens, expansion will slow down, and the line will concentrate on developing existing potential.

11:00 a.m. Tuesday *Joseph S. Wilson, Sunshine Biscuits, Inc. GTM let Railway Age make this pictorial record of a Sunshine shipment, supplied his own captions on Flexi-Van performance.*



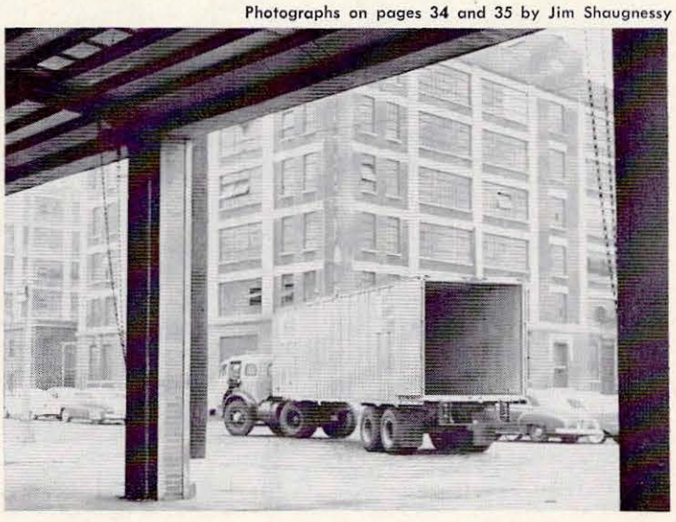
1.00 p.m. Wednesday *"First skid of Sunshine Hydrox cookies is loaded into van from assembly area."*

5:45 p.m. Wednesday *"Flexi-Van, traveling through highway tunnels, eliminates float service across Hudson that box cars would need, arrives at North Bergen 90 minutes later."*

Keeps Right on Expanding

Photographs on pages 34 and 35 by Jim Shaugnessy

12:15 p.m. Wednesday *"Tractor trailer leaves Lincoln Tunnel for Sunshine Biscuits' Long Island City plant."*

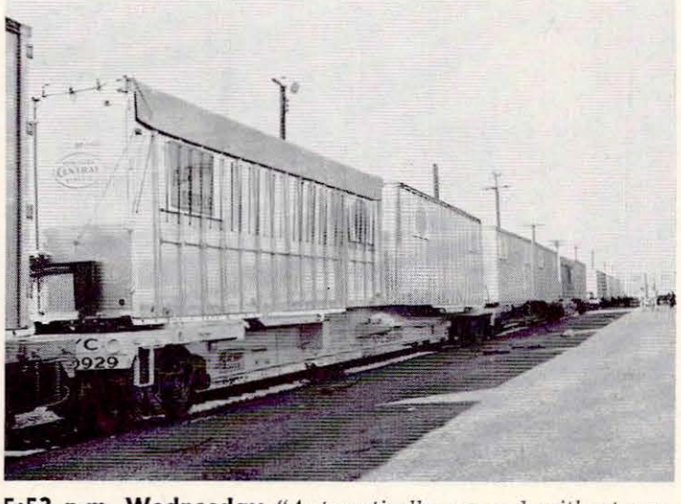


12:45 p.m. Wednesday *"Thirty minutes later, Flexi-Van has crossed Manhattan and the East River, backs into Sunshine loading dock."*

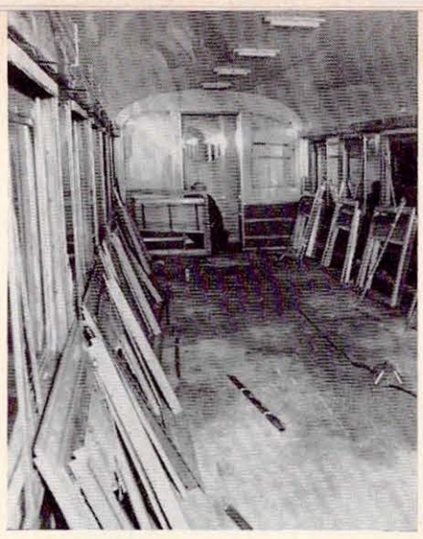
4:00 p.m. Wednesday *"Van is loaded and checker notes count on final skid."*

4:15 p.m. Wednesday *"Loaded and sealed, Central van is ready for return to North Bergen yard and line-haul move. Sunshine private unit is prepared for loading to local warehouses."*

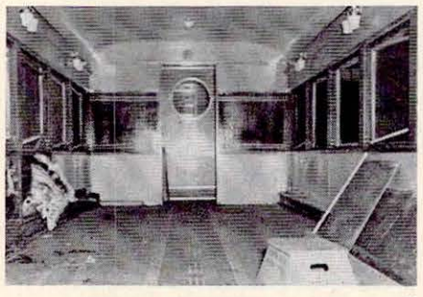
5:47 p.m. Wednesday *"Unlike conventional piggyback, Flexi-Van can be loaded immediately on any Flexi-Van car on arrival in yard."*



5:53 p.m. Wednesday *"Automatically secured without special tie-downs, Sunshine shipment shares car with open-top van, is ready to leave on WB 3 same night."*



CLEAR GLASS windows, frames, venetian blinds are removed.



TEAR-DOWN BEGINS. Here, the wall panels are on the way out.

THE FINISHED PRODUCT, before installation of renovated seats.

(*Continued from page 39*)

found it impossible to replace worn-out equipment that is costing them thousands of dollars each year in maintenance. We believe that our program will be one of the solutions to their problems."

The first 25 cars to go through the upgrading—17 coaches, eight coach-lounge cars—were acquired from C&NW by Hyman-Michaels Company and re-manufactured by Pullman-Standard under contract for Hyman-Michaels. They were returned to C&NW service under a six-year lease agreement, providing for monthly payment by the railroad.

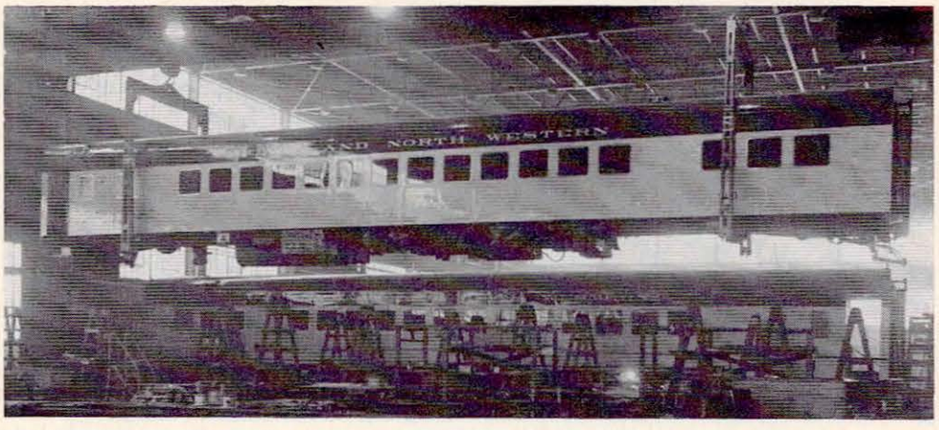
The North Western's current call for financing bids contemplates a five-year lease with purchase by the railroad at the end of the lease term. Purchase price of the cars is estimated at approximately $50,000 per unit, or $1,250,000 for the group of 25.

What's involved in re-manufacture? Complete rebuilding, installation of modern fixtures and facilities and reuse of only those parts judged suitable for continued service. In the C&NW cars, for example, Pullman-Standard made extensive use of plastics for wall and floor coverings, to reduce future maintenance costs. All windows and sash were replaced and new tinted glass (requiring no window shades) was installed. Lighting and other electrical equipment was completely modernized.

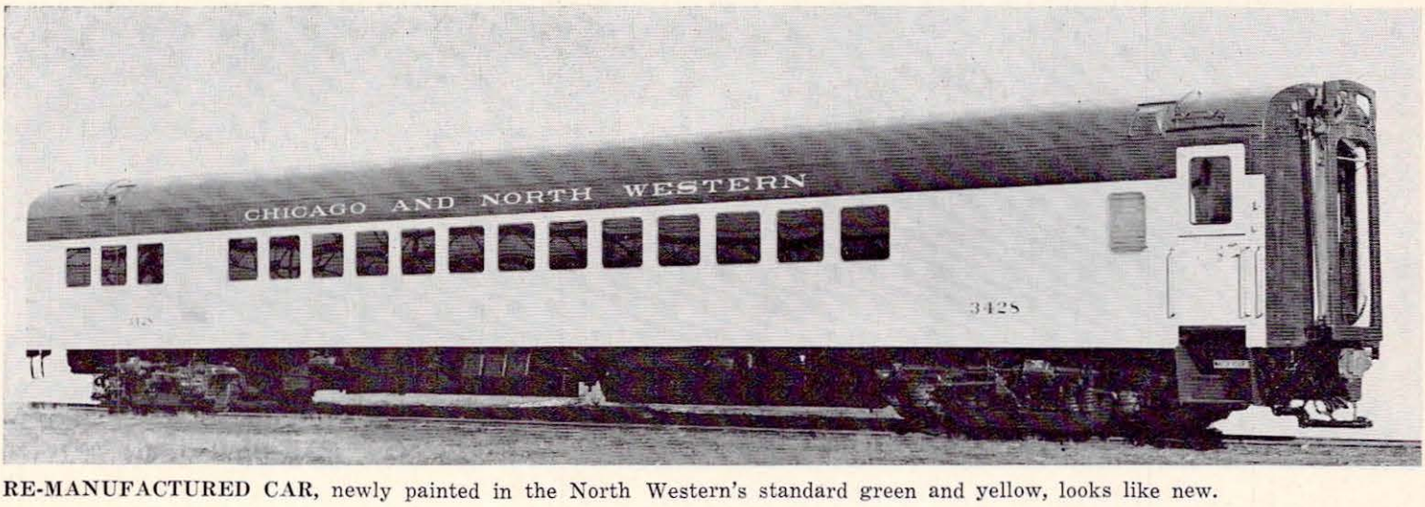
The result bears out the "like-new" claim made for the re-manufacturing process.

All the North Western cars rebuilt thus far have been run through the P-S Pullman Car Works at Chicago. But, President Scallan indicated, if the program meets with favorable response from other railroads, some of the P-S facilities at Worcester, Mass., may also be used for car re-manufacturing.

So Pullman-Standard is ready to go with its program. And, judging from the statistics on the average age of passenger equipment, there's good potential for the future—despite the declining trend in passenger traffic.



RE-MANUFACTURE, like initial carbuilding, lends itself to assembly line procedures—and the cost to the railroad is far lower than new car costs.

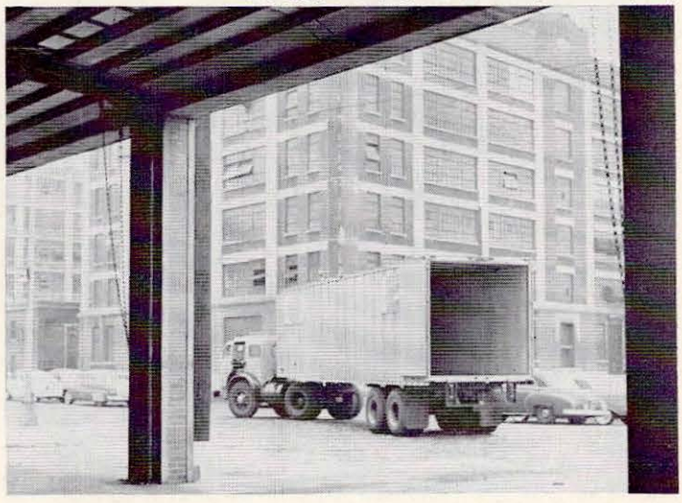


RE-MANUFACTURED CAR, newly painted in the North Western's standard green and yellow, looks like new.

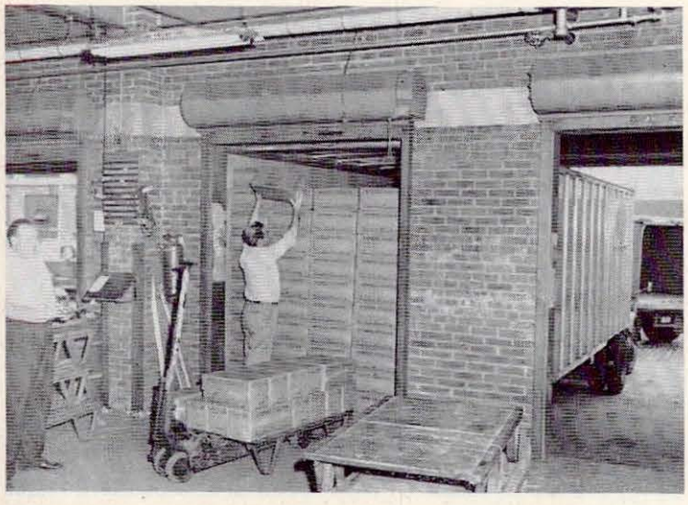
Keeps Right on Expanding

Photographs on pages 34 and 35 by Jim Shaugnessy

12:15 p.m. Wednesday *"Tractor trailer leaves Lincoln Tunnel for Sunshine Biscuits' Long Island City plant."*



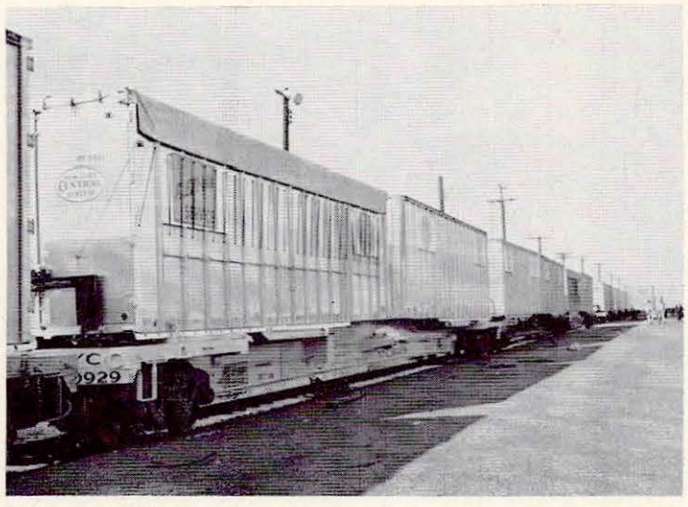
12:45 p.m. Wednesday *"Thirty minutes later, Flexi-Van has crossed Manhattan and the East River, backs into Sunshine loading dock."*



4:00 p.m. Wednesday *"Van is loaded and checker notes count on final skid."*

4:15 p.m. Wednesday *"Loaded and sealed, Central van is ready for return to North Bergen yard and line-haul move. Sunshine private unit is prepared for loading to local warehouses."*

5:47 p.m. Wednesday *"Unlike conventional piggyback, Flexi-Van can be loaded immediately on any Flexi-Van car on arrival in yard."*



5:53 p.m. Wednesday *"Automatically secured without special tie-downs, Sunshine shipment shares car with open-top van, is ready to leave on WB 3 same night."*

The Flexi-Van Story (*Continued from page 35*)

Railway Age photographs

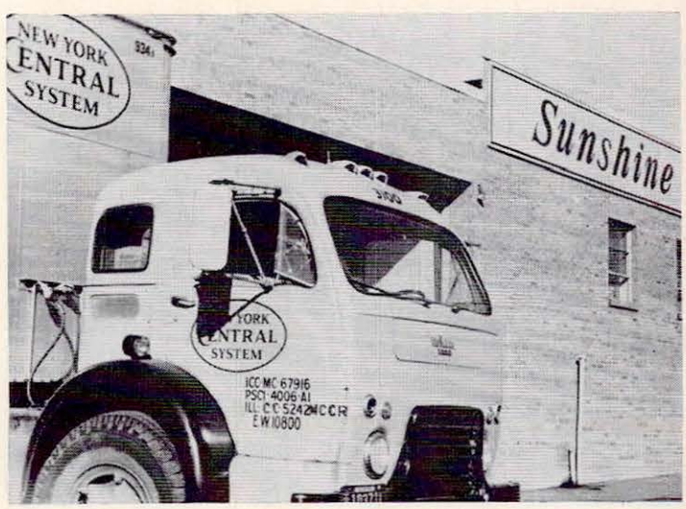
8:30 p.m. Wednesday *"Teletype reports pinpoint car through to destination, as with routine box car shipment, but Flexi-Van schedule eliminates need for shipper tracing."*

6:00 a.m. Friday *"WB 3 arrives Gibson Yard at 5:00 a.m. on schedule. Flexi-van cars are ready for fast unloading for delivery at the opening of the business day."*

6:09 a.m. Friday *"Flexibility of Flexi-Van service means that rush shipments can be unloaded immediately without waiting for the first vans on to be gotten out of the way."*

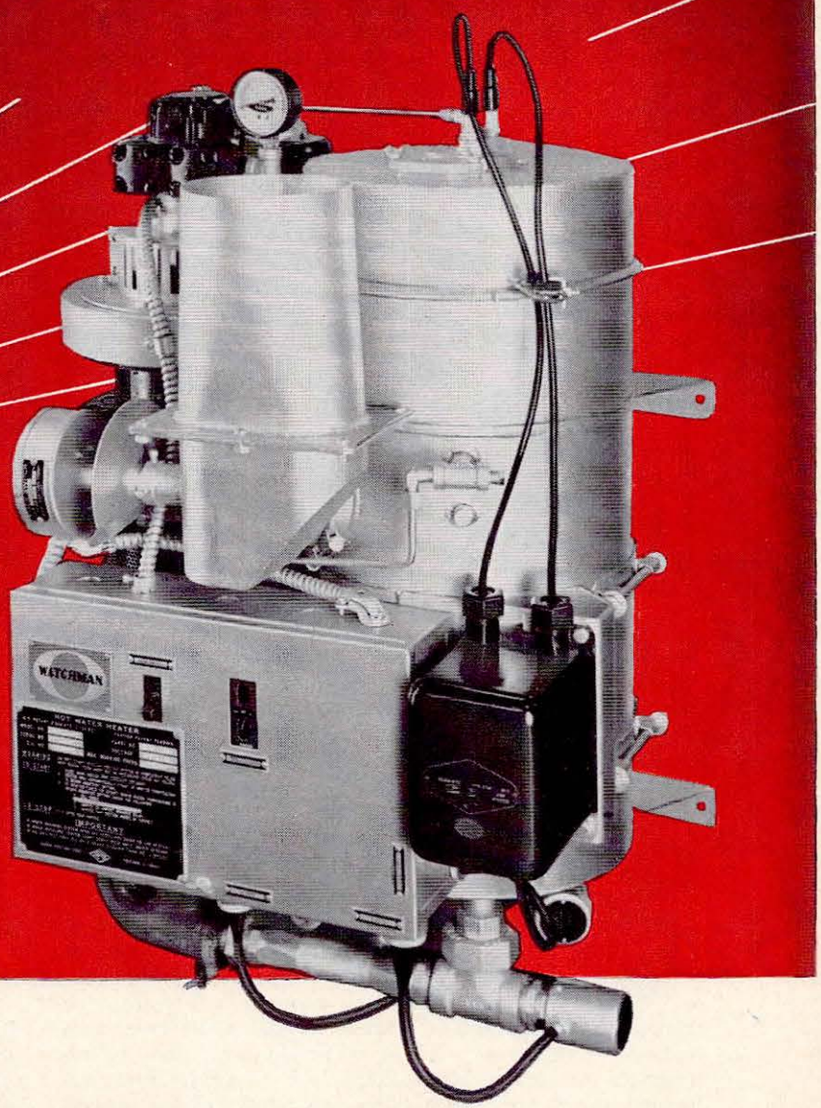
6:24 a.m. Friday *"Van loaded in New York Wednesday afternoon is dispatched for Sunshine Chicago's South Side Warehouse."*

6:40 a.m. Friday *"Terminal switching is eliminated after van arrives at Gibson transfer yard. Load heads directly for warehouse over city streets."*



7:34 a.m. Friday *"Shipment is spotted and ready for unloading second morning out of New York. Trucks all the way take three days."*

returns 50¢ annually of every dollar invested
by keeping engines warm without idling



VAPOR
WATCHMAN
HEATER

CONSISTENTLY EFFECTS $1000 NET SAVINGS PER YEAR, EVERY YEAR

pays for itself in less than 2 years!

We Can Prove It Using Your Own Operating Figures:

- Keeps diesel engines at a full 140° temperature when idling
- Uses just a fraction of the fuel used in idling
- Saves *a tank car* of fuel (per diesel) per year
- Eliminates need for engine watchman

ASK US:
We'll make a "50% Saving Survey"
of your diesel idling costs!

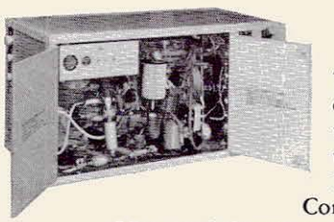
VAPOR HEATING CORPORATION
80 East Jackson Boulevard • Chicago 4, Illinois
Offices in principal cities

Why do users say that Tropic-Aire Reefers provide *"...the service that we in this industry desire and need"?*

That statement is quoted directly from a letter written by Mr. Rodney Tetrault, president of Indiana Refrigerated Lines, Inc., in reference to the sixteen Tropic-Aire refrigeration units presently operating with his fleet (with mention that there will soon be more).

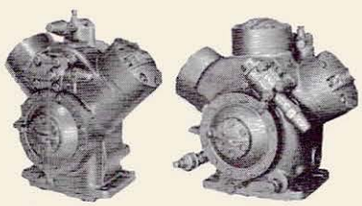
Why are outstanding fleet owners and operators, such as Indiana Refrigerated Lines, R. C. Motor Lines, Foremost Dairies, Safeway Stores, and Wabash Railway switching to Tropic-Aire refrigeration equipment for tough, long-haul jobs? Because only Tropic-Aire offers the *performance factors* essential to profitable, economical refrigerated transport: *power, overload capacity, absolute dependability, low operating costs,* and *your choice of power plants and fuels.*

These performance factors are not resultant of accidents. They are carefully planned developments designed to meet a need. And here are the reasons for Tropic-Aire's superiority.



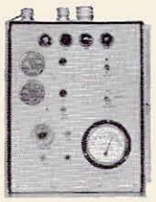
ENGINES

There are three specifically-designed powerplants basic to Tropic-Aire refrigeration units: the Continental N-62 (gasoline or LP), Continental Y-91 (gasoline or LP), and Continental ZD-129 (diesel). All are 4-cylinder, liquid-cooled engines, varying in horsepower according to the capacity of the refrigeration system. All Tropic-Aire units employ direct engine-compressor drive. For compactness, both compressor and condenser are mounted inside the engine frame. Condenser is cooled by 4000 cfm propeller type fan.



COMPRESSORS

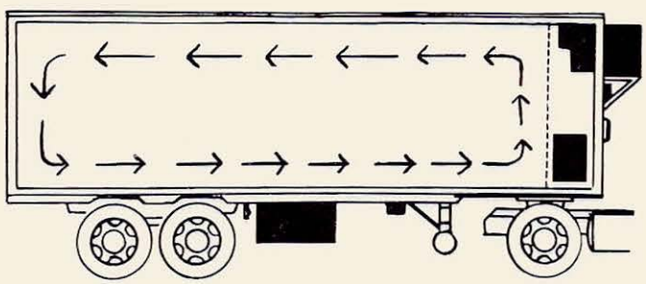
Depending upon the refrigeration capacity of the unit, two types of compressors are employed in Tropic-Aire refrigeration equipment. Carrier Model 5F20 is a two-cylinder compressor, capable of producing 5 tons of refrigeration. Carrier Model 5F30 is a 3-cylinder unit, designed for 8 tons. Both types are fabricated of rugged aluminum alloy, specifically for transport purposes. All Tropic-Aire compressors are force lubricated. Five-ton system requires 18 lb. Freon 12; 8-ton system requires 22 lb.



CONTROL PANEL

The control panel is waterproof and dustproof; it is ordinarily mounted in a position on the trailer nose where it is visible at all times. Lights indicate cooling, heating, defrosting, oil pressure and generator operation. Gauges show fuel level, engine temperature, and temperature of trailer interior. A three-way switch controls cargo heating and cooling; single switches control starting, lighting and manual defrost. (Defrosting may be controlled either manually or automatically.)

CONSTANT AIR CIRCULATION



Constant circulation of refrigerated air above, below and on all sides of the cargo is another factor in providing an ideal refrigeration service. In operation, whether the refrigeration system is idling or at full cooling, the evaporator blowers, inside the trailer housing, continuously circulate air — to assure that the cargo remains in premium condition, prevents edge-thawing of frozen cargoes, and makes certain that fresh fruits and vegetables retain their crispness.

STANDARD COMPONENTS

The fact that most Tropic-Aire refrigeration components are standard makes possible quick, easy repair or replacement, if necessary. Nearly any part of either powerplant or refrigeration system may be located quickly, wherever such automotive parts are sold (many Continental Motors sales and service outlets carry supplies of parts). For further details on parts, see the Tropic-Aire warranty.

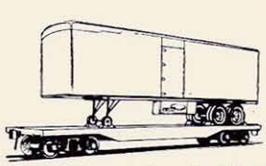
Let your Tropic-Aire field representative give you full details and information about Tropic-Aire refrigeration . . . America's newest and finest!

ANOTHER PRODUCT OF

McGRAW-EDISON

McGRAW-EDISON CO.
TROPIC-AIRE DIVISION
5201 West 65th Street
Chicago 38, Illinois

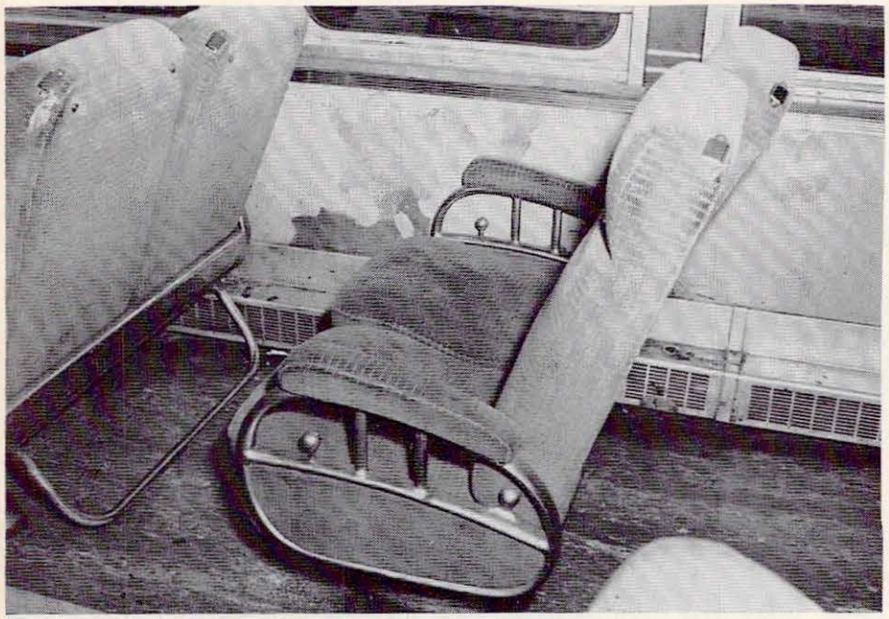
TROPIC-AIRE Carrier



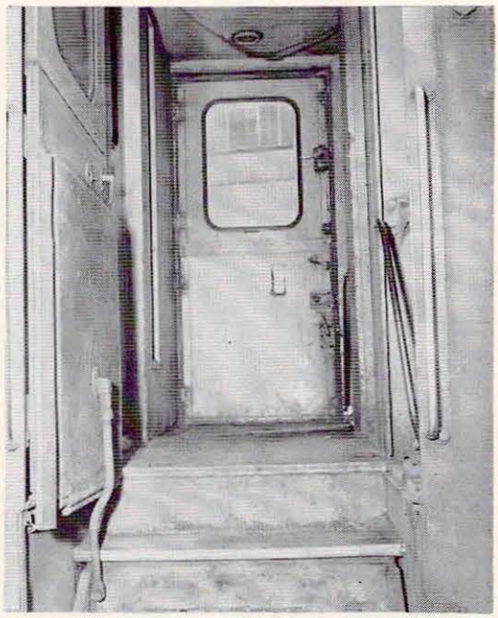
MOBILE REFRIGERATION
AIR CONDITIONING

"Tropic-Aire" is a trademark of McGraw-Edison Co., Chicago. ©1958 by McGraw-Edison Co.

P-S Makes Old Cars . . . .



INTERIOR BEFORE—worn seats, worn paneling, clear window glass, window shades, all need replacement or modernization.



BEFORE REBUILDING—the vestibule shows need for extensive work.

. . . . Like New at Low Cost

INTERIOR AFTER—renovated seats, tinted glass, no shades, extensive use of plastics to reduce future maintenance costs.

Pullman-Standard's passenger car re-manufacturing program is ready to slip into high gear.

Twenty-five coaches and coach-lounge cars have already gone through the P-S rebuilding and upgrading process. Twenty-five more will get the treatment as soon as financing and lease arrangements can be worked out. And Pullman-Standard, viewing the operation as a shot in the arm to the rail passenger business, is hoping that those first 50 cars will be the first of many to be re-manufactured.

The initial group—pre-war streamlined cars—are now in general mainline service on the Chicago & North Western. C&NW will also get the additional 25 cars for which financing is being worked out. (The railroad will open bids October 15 for financing purchase of the re-manufactured units.)

Pullman-Standard sees its new program as a means by which railroads can acquire "like-new" passenger equipment for about one-third the cost of new cars. The actual dollar savings: up to $100,000 per unit.

"Pullman-Standard is fully aware of the present difficulties railroads are experiencing in their passenger car business," P-S President J. W. Scallan commented. "With traffic losses mounting, the railroads have

(*Continued on page 42*)

MORTONBOND

SANDWICH PANELS

YOU SPECIFY...
and
MORTON BONDS

ANY SKIN to ANY CORE!

MOST MODERN HOT PRESS BONDING EQUIPMENT — extreme flatness tolerance . . . panels 10′ or larger . . . finite pressure and temperature controls.

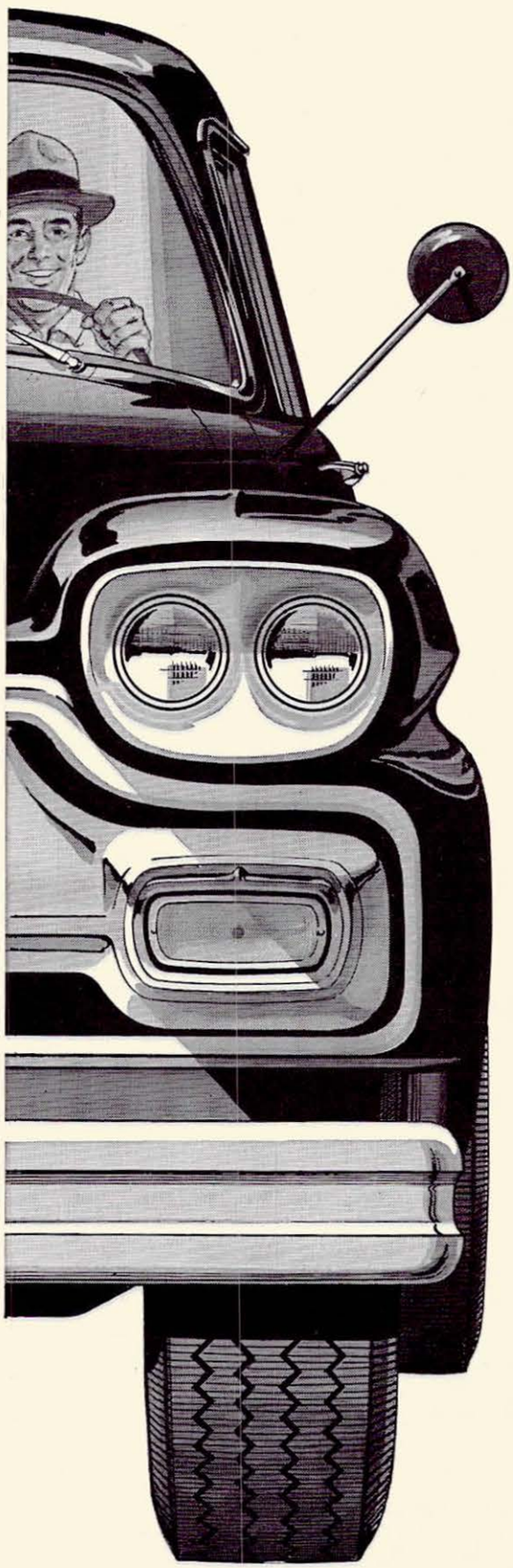
CORES — of paper and aluminum honeycomb . . . rigid foams. SKINS — of aluminum . . . stainless steel. . . . Other combinations available too, with ADHESIVES selected for your special requirements.

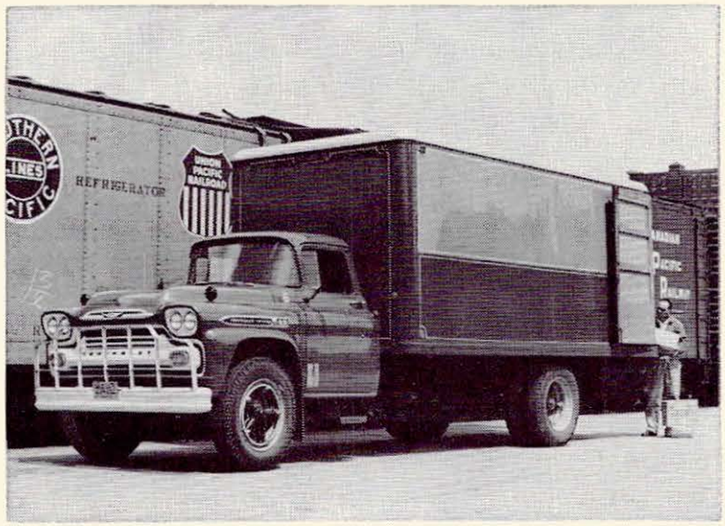
MORTONBOND panels can give you ultimate strength to weight ratios — insulation — light weight — flatness — for present use or for new and advanced designs. We have engineers who want to work with you. Call or write today.

Morton MANUFACTURING COMPANY

General Offices and Main Plant • **5125 West Lake Street, Chicago 44, Illinois** • **AUstin 7-1120**

NEW CHEVROLET TRUCKS FOR '59!





New Might! New Models! New Money-Saving Power!

Task-Force 59 brings you more to work and save with in every weight class—more models, thriftier engines, stronger cabs and frames, safer brakes, tougher axles and transmissions! Here's the longest, strongest line of Chevrolet trucks ever built, the best yet of the best sellers!

Good news in the light-duty class! Chevy's longer, stronger '59 line gives you a *dozen* big pickups to choose from . . . new 4-wheel drive models, newly fashioned panels, Step-Vans, and Sedan Deliveries! Scores of innovations include new hard-pulling Positraction rear axle, new bigger brakes, new stronger cabs, new broad-shouldered styling refinements!

Bright new middleweight and heavyweight might! New big-tonnage L.C.F. and conventional trucks are heftier than ever with new 5-speed transmissions, new huskier clutches, more durable rear axles in capacities as high as 18,000 lbs.! G.V.W.'s go up to 36,000 lbs. in tandems . . . and up to 21,000 lbs. in new Series 50H and 60H models with heavy-duty components!

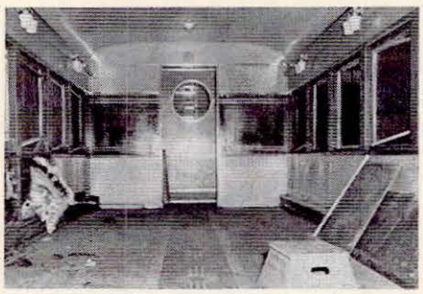
New thriftier 6's, all-new V8 power! Chevy's best selling 6's are set to pinch pennies like never before with new camshaft design, new valve train durability! *Six* modern V8's are tougher built for bigger savings; an all-new V8, the 185-h.p. Workmaster Special* with advanced Wedge-Head design, is offered in Series 70 and 80! See 'em for yourself—the bright new trucks of Task-Force 59 at your dealer's now! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

**Optional at extra cost.*

CHEVROLET

CHEVROLET TASK·FORCE 59 TRUCKS

CLEAR GLASS windows, frames, venetian blinds are removed.



TEAR-DOWN BEGINS. Here, the wall panels are on the way out.

THE FINISHED PRODUCT, before installation of renovated seats.

(*Continued from page 39*)

found it impossible to replace worn-out equipment that is costing them thousands of dollars each year in maintenance. We believe that our program will be one of the solutions to their problems."

The first 25 cars to go through the upgrading—17 coaches, eight coach-lounge cars—were acquired from C&NW by Hyman-Michaels Company and re-manufactured by Pullman-Standard under contract for Hyman-Michaels. They were returned to C&NW service under a six-year lease agreement, providing for monthly payment by the railroad.

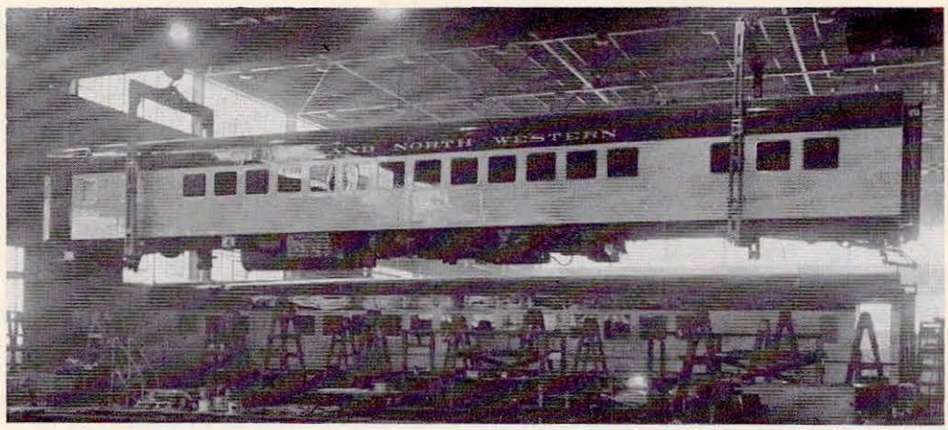
The North Western's current call for financing bids contemplates a five-year lease with purchase by the railroad at the end of the lease term. Purchase price of the cars is estimated at approximately $50,000 per unit, or $1,250,000 for the group of 25.

What's involved in re-manufacture? Complete rebuilding, installation of modern fixtures and facilities and reuse of only those parts judged suitable for continued service. In the C&NW cars, for example, Pullman-Standard made extensive use of plastics for wall and floor coverings, to reduce future maintenance costs. All windows and sash were replaced and new tinted glass (requiring no window shades) was installed. Lighting and other electrical equipment was completely modernized.

The result bears out the "like-new" claim made for the re-manufacturing process.

All the North Western cars rebuilt thus far have been run through the P-S Pullman Car Works at Chicago. But, President Scallan indicated, if the program meets with favorable response from other railroads, some of the P-S facilities at Worcester, Mass., may also be used for car re-manufacturing.

So Pullman-Standard is ready to go with its program. And, judging from the statistics on the average age of passenger equipment, there's good potential for the future—despite the declining trend in passenger traffic.



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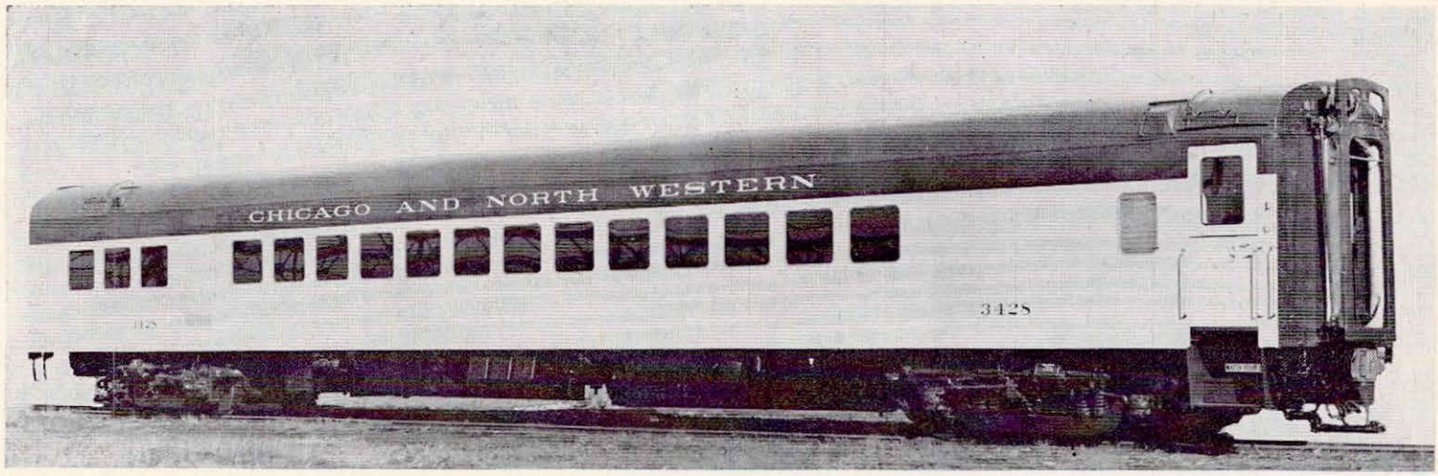


RE-MANUFACTURED CAR, newly painted in the North Western's standard green and yellow, looks like new.

BENDIX FUEL INJECTION EQUIPMENT...

Speeds diesel-electric locomotives around the world!

General Electric, 65 years a major locomotive manufacturer, insists on the best of quality components for its diesel engines. Their new standard line of universal diesel-electric locomotives has been thoroughly proven in railroad use both in the United States and elsewhere throughout the world. And these modern locomotives, powered by Cooper-Bessemer diesel engines, utilize standard precision-built Bendix fuel injection equipment for high fuel economy and dependability.

In areas from sea level to 14,700-foot altitudes, in temperatures ranging from 130°F to −65°F, in remote locations where dependability is absolutely necessary, Bendix injection equipment has operated at maximum efficiency to speed General Electric locomotives around the world.

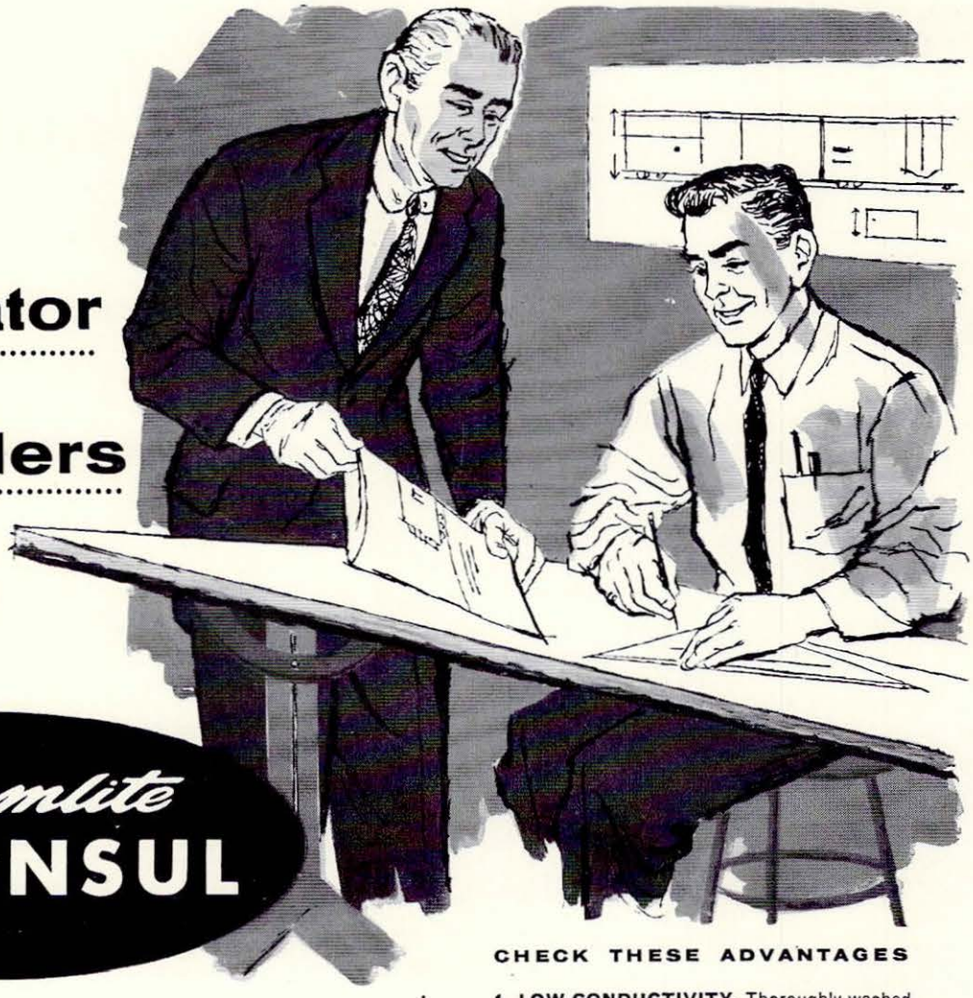
There's no question about the choice of Bendix injection equipment for dependable, economical operation. That is why so many leading diesel manufacturers specify Bendix for their injection equipment requirements.

Scintilla Division of Bendix Aviation Corporation, Sidney N. Y. Export Sales and Service: Bendix International Division, 205 East 42nd Street, New York 17, N. Y.

Scintilla Division
SIDNEY, N. Y.

Bendix
AVIATION CORPORATION

More Refrigerator Car Builders Specify–



Streamlite HAIRINSUL

Experienced car builders *know* that Streamlite HAIRINSUL can be depended upon to protect perishables under every conceivable operating condition.

Streamlite HAIRINSUL is lightweight and easy to install. Its complete range of weights and sizes adapts itself to car builders' needs. And Streamlite HAIRINSUL is permanent—it actually outlives the car.

AMERICAN HAIR & FELT COMPANY
Merchandise Mart • Chicago 54, Illinois

CHECK THESE ADVANTAGES

1. **LOW CONDUCTIVITY.** Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.
2. **LIGHT WEIGHT.** Advanced processing methods reduce weight of Streamlite Hairinsul by 40%.
3. **PERMANENT.** Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.
4. **EASY TO INSTALL.** Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.
5. **COMPLETE RANGE.** Streamlite Hairinsul is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other specified coverings are available.
6. **HIGH SALVAGE VALUE.** The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

SETS THE STANDARD BY WHICH ALL OTHER REFRIGERATOR CAR INSULATIONS ARE JUDGED

MARKET OUTLOOK *at a glance*

Carloadings Rise for Fourth Straight Week

Loadings of revenue freight in the week ended Oct. 4 totaled 677,016 cars, the Association of American Railroads announced on Oct. 9. This was an increase of 4,092 cars, or 0.6%, compared with the previous week; a decrease of 70,631 cars, or 9.4%, compared with the corresponding week last year; and a decrease of 138,177 cars, or 17%, compared with the equivalent 1956 week.

Loadings of revenue freight for the week ended September 27 totaled 672,924 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, September 27

District	1958	1957	1956
Eastern	96,063	111,199	133,106
Allegheny	117,186	144,647	158,097
Pocahontas	57,778	64,133	64,975
Southern	119,832	122,679	131,776
Northwestern	104,951	119,649	143,507
Central Western	128,379	125,616	137,122
Southwestern	48,735	51,343	63,065
Total Western Districts	282,065	296,608	343,694
Total All Roads	672,924	739,266	831,648
Commodities:			
Grain and grain products	57,084	50,043	58,295
Livestock	10,058	9,315	13,342
Coal	125,021	141,973	145,656
Coke	7,065	10,096	12,266
Forest Products	40,161	37,820	44,160
Ore	57,268	81,032	91,806
Merchandise l.c.l.	50,247	57,002	63,101
Miscellaneous	326,020	351,985	403,022
September 27	672,924	739,266	831,648
September 20	667,277	724,934	822,436
September 13	665,999	741,147	820,849
September 6	563,351	646,117	679,651
August 30	645,432	745,620	784,366
Cumulative total, 39 weeks	22,152,221	27,136,238	28,180,130

IN CANADA.—Carloadings for the seven-day period ended September 21 totaled 78,179 cars, compared with 78,656 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
September 21, 1958	78,179	26,681
September 21, 1957	87,938	30,559
Cumulative Totals:		
September 21, 1958	2,705,448	1,021,977
September 21, 1957	2,938,224	1,206,057

New Equipment

FREIGHT-TRAIN CARS

► *Lehigh Valley.*—Will construct 40 additional piggyback flatcars at its Packerton shop at Lehighton, Pa. The new flats will be converted from hopper cars. Delivery is scheduled to begin this month.

► *Inland Steel.*—Ordered 100 gondola cars from General American Transportation Corp. for use in hauling mill scrap and mill scale at Inland's Indiana Harbor Works. Purchase, Inland indicated, is intended to reduce demurrage costs by minimizing the number of foreign-ownership cars in use at the plant.

► *Missouri Pacific.*—Directors authorized purchase of 100 37-ft insulated refrigerator trailers and 50 chassis for piggyback transportation of perishables. Cost of the purchase is estimated at $1,200,000.

► *Sacramento & Northern.*—This Western Pacific subsidiary ordered 10 70-ton covered hopper cars from ACF Industries at estimated cost of $123,-450. Delivery is scheduled for November.

► *Tidewater Southern.*—Ordered 50 50-ton insulated box cars from Pacific Car & Foundry at estimated cost of $718,000. The TS, a Western Pacific subsidiary, says 40 of the cars will be equipped with D-F loaders, 10 with TC loaders and aluminum cross members. Delivery is scheduled to start in December.

► *Repair Ratio 3.3% Higher Than Last Year.*—Class I roads on Sept. 1 owned 1,741,016 freight cars, 6,475 more than a year ago, according to AAR report summarized below. Repair ratio was 3.3% higher than on Sept. 1, 1957.

	Sept. 1, 1958	Sept. 1, 1957	Change
Car ownership	1,741,016	1,734,541	+ 6,475
Waiting repairs	143,943	86,008	+57,935
Repair ratio	8.3	5.0	+ 3.3

LOCOMOTIVES

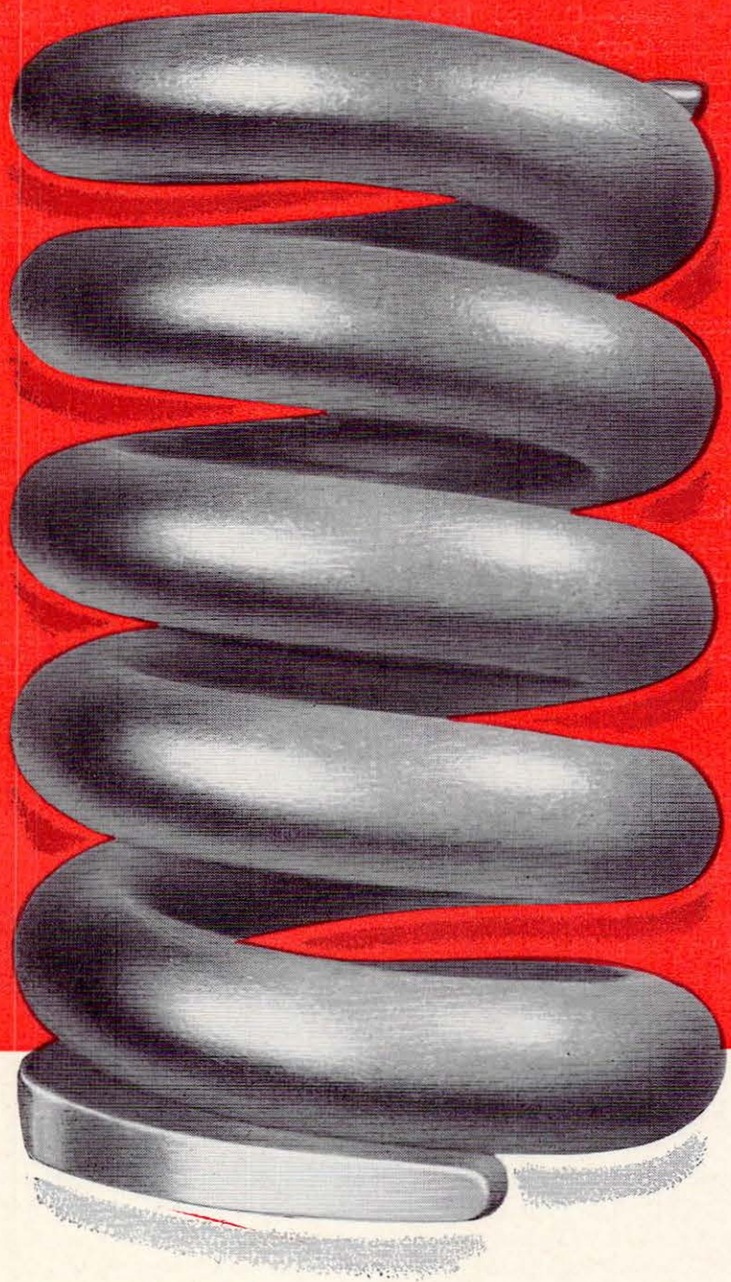
► *Grand Trunk Western.*—Ordered nine 1,750-hp road switchers and seven 900-hp yard switchers from Electro-Motive Division of General Motors Corp., at a total cost of $2,500,000. Road switching units will be delivered by Oct. 31, yard switching units by Nov. 30.

New Facilities

► *Missouri Pacific.*—Projects not previously announced in connection with construction of retarder yard at Kansas City, Mo.: installation of pneumatic tube system, at estimated cost of $271,000; construction of compressor plant, $110,500; and installation of electronic motion weighing track scale at east hump of double-hump yard, $72,500. Other current MoPac projects include: reconstruction of Bridge 4309(550) at Pickens, Ark., $30,500; relocation of division offices, conversion of interlocker and replacement of crossing at Nevada, Mo., $44,100; extension of pile deflection dikes on Brazos River at Goodland, Tex., $35,900; and raising of grade on account of construction of Oologah dam and reservoir, Oologah, Okla., $39,400.

a RAILWAY AGE time-saver page

LOOK AT



1.

Longer Service Life

All ASF Extended Life Springs are shot-peened—which cold-works surfaces and more than doubles the life of the spring.

ASF

ALL THREE

...before you specify truck springs!

2. Better Performance

A new heat-treating process makes ASF Extended Life Springs far better able to maintain load-carrying capacity—without permanent set.

3. Lower Cost

ASF Extended Life Springs are now available at no increase in cost over conventional springs. Because they last over twice as long, they cut your spring costs per car mile.

E-X-T-E-N-D-E-D L-I-F-E SPRINGS

A contribution to railroad progress...through research by

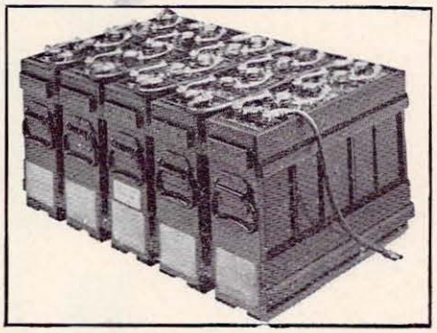
AMERICAN STEEL FOUNDRIES

Prudential Plaza, Chicago 1, Illinois

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

Other Foreign Sales: American Steel Foundries, International, S.A., Chicago.

No power let-down here...



...because there's power to spare here

Power to spare when you need it most. That's the reputation that has made Edison storage batteries first choice on railroads throughout the country

Now—in the fiftieth anniversary year of the EDISON nickel-iron-alkaline battery—EDISON batteries offer brand-new dependability and longer life thanks to a new active material developed to meet the increasing demand of today's lighting, air-conditioning, and communications systems. This new material—on long-term test—has shown it can provide new durability and economy over the full range of passenger-car and caboose operating conditions.

For information on EDISON storage batteries, contact your local Edison representative or write Edison Storage Battery Division, Thomas A. Edison Industries, West Orange, N. J. In Canada: International Equipment Co., 90 Bates Road, Montreal, P. Q.

50th Anniversary
EDISON Nickel-Iron-Alkaline STORAGE BATTERY
1908-1958

Celebrating 50 years of progress, production, and continuing research . . . a background that brings you the world's longest lived, most dependable storage battery—*the battery that's built with tomorrow in mind.*

Edison NICKEL—IRON —ALKALINE Storage Batteries

. . . a product of Thomas A. Edison Industries of McGRAW EDISON

B&O Cuts Its Costs

(*Continued from page 27*)

258 men, or 48.5 points per man. As this is the first overall proficiency rating determined for this shop, an arbitrary figure of 61 points per man was selected as a goal to be reached. Therefore, the shop has a 79.5 per cent (48.5 divided by 61) proficiency rating. To illustrate the use of columns G, J, K, L, and M of the form (p. 27), points per unit are shown in three groups—normal dispatchments, heavy running dispatchments, and monthly forming. For simplicity, the points per unit do not differentiate between passenger, freight and switch units.

While the cost control system described here is for locomotive units, the B&O Mechanical Department will use the same method for control of car costs. With the cooperation of the stores and purchasing departments, the same system is also contemplated for better control of material costs.

Current Publications

FROM THE MANUFACTURERS

THE "RAILINER"—MODERN AS TOMORROW. 8 pages, illustrated with photographs and drawings. Southern Car & Manufacturing Co. Dept. RA, P.O. Box 2312, Birmingham 1, Ala.

This new brochure outlines 15 basic principles for the Railiner transportation system (RA, June 23, p. 30). The container, which has no moving parts, is designed for use in all types of piggyback operation and can be interchanged freely among railroads, motor carriers or ship lines. Neither special flat cars nor tie down are required.

A special transfer unit for moving any size container from trailer chassis to flat car and back again is available on a rental basis. If desired, transfer operations will be provided on contract by manufacturer.

Other parts of railiner system include a demountable over-the-road semi-trailer with hydraulic lifts. (Roads need buy only this item). Containers can be left on special "posts" at loading or unloading site, freeing over-the-road chassis for work elsewhere. Delivery of equipment is quoted on a 90-day basis.

•

ENERGETICALLY YOURS. 16 mm. film, sound, color, 13-min. Standard Oil Company (New Jersey), Dept. RA, Room 1610, 30 Rockefeller Plaza, New York 20. Free on loan.

A cartoon-type film that tells the remarkable story of energy and its contribution to the progress of mankind. It traces man's unending search for new sources of energy and shows how their use altered his life.

J.G. Benedetti
CPR

A.M. Fraser
CPR

D.M. Dunlop
CPR

George A. Craig
C&EI

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Automation Keys RR Growth

(Continued from page 10)

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Find Substitutes for Subsidy!

The railroads are stuck with a dilemma in having to find a program which will reconcile two contradictory conditions, viz.:

1. A gigantic program of capital expenditures (from tax funds) to expand and improve waterways, highways and air transport — and a consequent shrinkage of investment funds available (from private sources) for renewing and improving railroad plant.

2. The stubborn and praiseworthy determination of railroad leaders not to seek or accept parallel subsidies for the railroads.

The ideal solution to the dilemma, of course, would be for government to treat highways, waterway and air transport plant strictly as the public utilities that they are. With traffic growing the way it is in the air, and on the waterways and highways—it is quite obvious that these facilities could be fully supported (including property taxation) by payments collected from users.

Transportation plant provided by government initiative should be put upon a capitalistic basis (as a public utility without tax money or government credit to support it). Then all transportation would be on an equal level with railroads in seeking investment capital. Investment funds would be parceled out between railroads and other forms of transportation exactly in ratio to the economic merits of each. The highway "utilities"—and those operating waterways and airports—would get their new money exactly the way the railroads have to get it, namely, in proportion to existing and prospective earnings.

This is the way it ought to be. This is the way it will *have* to be eventually—unless transportation skids into complete socialization. But, meantime, the railroads have got the tough job of holding the fort for free enterprise. And they won't do much good for free enterprise if they shrivel up for lack of money for replacements.

What the railroads need is a 'shoo-fly' to route them around the debacle of national transportation policy, while the wreck is being cleared up. They need some way of increasing earnings and investment capital while the slow machinery of government gradually corrects its mistakes.

President James Symes of the Pennsylvania has dramatized the railroad shortage of investment capital more frankly than any other railroad leader has yet done—in his proposal for the use of government credit to support railroad equipment loans. Few other railway spokesmen have shown much enthusiasm for the "Symes plan." None can deny, however, that there are many railroads which need equipment and other improvements. Much of it they either cannot finance at all, or only at excessive interest rates.

The railroad industry surely wants to avoid a critical shortage of capacity when general business gets going strongly. So it will either have to be more hospitable than it has been to expedients like the Symes plan, or contrive something more acceptable.

Expedients of similar purpose were proposed for the Transportation Act of 1958, but failed to be included. One was an income tax deduction for earnings set aside for capital expenditures. Another was more rapid depreciation of railroad property. These suggestions are reasonable and necessary. They should be enacted in the public interest in healthy and unsocialized railroads.

RESTORE RAILROAD INVESTMENT NOW: While full equality among the various forms of transportation is being worked out, railroad capacity and efficiency must not be allowed to deteriorate for lack of adequate new investment. Expedients to this end must be carefully contrived—not to jeopardize the railroads' status as unsubsidized free enterprise. Attainment of equitable treatment ten years hence is not the railroads' most pressing problem—they still must seek revival of full-scale investment for renewal and improvement in 1958 and 1959.

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You Ought To Know...

auguration of what is claimed to be the first through motor carrier freight service between all points in the U.S. and Mexico has been announced by International Freight Service, Inc., of McAllen, Tex. International's president, R. V. D. Evans, noted that "through rail service between the U.S. and Mexico has been increasingly hampered by costly delays caused by huge back-logs of freight, with delays running as high as 90 days and more." He promises 36-hour truck service to Mexico City from the border.

arring a "serious strike or other unforeseen setback" in the remaining months of 1958, the Milwaukee expects net income to equal 1957 figures—a little less than $8,000,000. President William J. Quinn told the New York Society of Security Analysts that, although gross revenues are off almost $10,500,000, expense reductions have covered 92 per cent of the revenue decrease.

pokane International has finally come under control of the UP. The 150-mile bridge line between Spokane, Wash., and Eastport, Ida., was bought in a stock deal that involved the exchange of 200,135 shares of UP for 192,438 shares of SI. UP got 96 per cent control. (RA, Sept. 8, p. 80.)

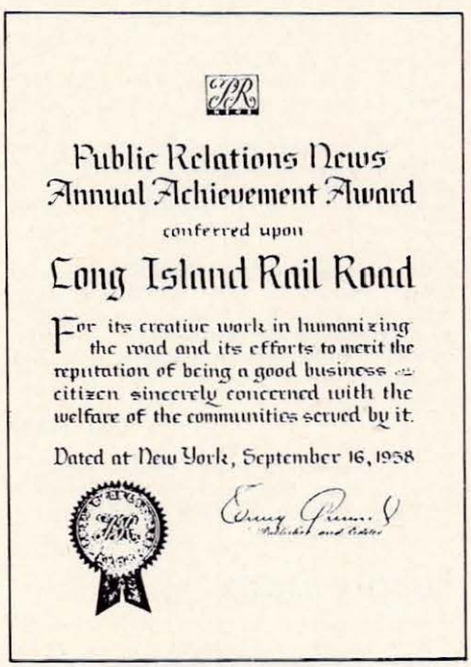
chedule changes announced for New York Central's fall timetables will provide faster service between New York and Montreal and New York and Toronto by adding cars for Canadian points to the Empire State Express. In the process, coach reservations on the Empire will be dropped. New schedule takes effect October 26.

oordinated land-sea transport is moving a 500,000-lb G-E power plant component from Schenectady, N.Y., to Tokyo, Japan. Universal Transcontinental Corp., subsidiary of U.S. Freight Co., is handling the shipment of the $800,000-unit.

Ore-tonnage volume handled at Newport News by The Chesapeake & Ohio is increasing, C&O Materials Handling Engineer R. C. Tench has told the AIME-ASME Joint Solid Fuels Conference. Ore Pier 9, Mr. Tench said, "is capable of discharging the largest ore carriers now afloat." But ore tonnages are still not comparable with the railroad's coal traffic at the port. "In 1957," Mr. Tench said, "C&O transferred 26,982,532 tons of coal from railroad cars to ships at Newport News."

Postponement of the 22nd annual meeting of the National Association of Shippers Advisory Boards, originally slated to be held in Pittsburgh October 7-9, has been announced. Future plans will be announced as soon as possible. The postponement was caused by a hotel strike.

Winning traffic clubs in the National Transportation Week contest for the best overall promotional job in connection with the Week were: Group A (cities under 50,000)—Nassau-Suffolk Traffic Club, Long Island, N.Y.; Group B (cities from 50,000 to 500,000), a tie—Oakland Traffic Club and the Transportation Club of Salt Lake City; Group C (cities over 500,000), also a tie—the Traffic Club of St. Louis and the Milwaukee Traffic Club.


Public Relations News
Annual Achievement Award
conferred upon
Long Island Rail Road
For its creative work in humanizing the road and its efforts to merit the reputation of being a good business citizen sincerely concerned with the welfare of the communities served by it.
Dated at New York, September 16, 1958

LIRR EMPLOYEES found a reproduction of this award in their pay envelopes the other day—recognition by the company that good public relations is everybody's job. The award from Public Relations News is the first ever won by a railroad.

Subsidies keep popping up in New York's city transit problems as possible solutions. Latest crisis is a possibility of abandonment by the Staten Island Rapid Transit RR unless New York City pays its entire operating loss on passengers. SIRT, a B&O subsidiary, is a 15-mile city transit line carrying 13,000 passengers daily to the Staten Island ferry to Manhattan. Total losses run close to a million dollars a year. Of this, SIRT already gets approximately $375,000 from the city as a refund of taxes and other charges it pays the city. ► City-owned rapid transit is no better off than the privately-owned SIRT. A recent report by a spokesman for the City's Transit Commission noted that operating expenses on the subways were running over operating costs by almost $2 million a month. The report suggested that a better alternative than fare increases required by existing state law would be repeal of the "self-sustaining" law and subsidy by the city. But city taxpayers already pay all debt service on the subways (almost a billion dollars since 1946) as well as exempting the whole operation from taxes.

Missouri Pacific's Crete branch in Nebraska should be abandoned, an ICC examiner recommends. MoPac contends it has lost money on the 70-mile line for 12 years. The branch runs from a point near Auburn to Crete.

The day of the general freight rate increase is past. Only through "substantial, selected" rate reductions will the railroads be able to gain incremental revenue and restore their competitive position. The speaker: C&NW Chairman Ben W. Heineman, long a champion of competitive pricing. Mr. Heineman told the Western Railway Club that such adjustments are happening now, will happen faster in the future. With added traffic volume, he predicted, "the results could be surprising."

Northern Pacific has taken delivery on the last of 58 diesel units purchased during 1958—at a cost of almost $10,000,000. Acquisitions this year include 31 1,750-hp road switchers and 15 1,200-hp switchers from Electro-Motive Division and 12 1,800-hp road switchers from Alco Products, Inc. In the 20 years since NP acquired its first diesel, the road has built its fleet up to 612 units at a cost of almost $93,500,000. Full dieselization came early this year.

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Service-tested Freight Car Repair Parts For All Types of Cars

Railway Tank Cars and Storage Tanks 6-000- 8,000- and 10,000-gallon Cleaned and Tested

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EMPLOYMENT OPPORTUNITIES SECTION

Railway Age
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Find Substitutes for Subsidy!

The railroads are stuck with a dilemma in having to find a program which will reconcile two contradictory conditions, viz.:

1. A gigantic program of capital expenditures (from tax funds) to expand and improve waterways, highways and air transport — and a consequent shrinkage of investment funds available (from private sources) for renewing and improving railroad plant.

2. The stubborn and praiseworthy determination of railroad leaders not to seek or accept parallel subsidies for the railroads.

The ideal solution to the dilemma, of course, would be for government to treat highways, waterway and air transport plant strictly as the public utilities that they are. With traffic growing the way it is in the air, and on the waterways and highways—it is quite obvious that these facilities could be fully supported (including property taxation) by payments collected from users.

Transportation plant provided by government initiative should be put upon a capitalistic basis (as a public utility without tax money or government credit to support it). Then all transportation would be on an equal level with railroads in seeking investment capital. Investment funds would be parceled out between railroads and other forms of transportation exactly in ratio to the economic merits of each. The highway "utilities"—and those operating waterways and airports—would get their new money exactly the way the railroads have to get it, namely, in proportion to existing and prospective earnings.

This is the way it ought to be. This is the way it will *have* to be eventually—unless transportation skids into complete socialization. But, meantime, the railroads have got the tough job of holding the fort for free enterprise. And they won't do much good for free enterprise if they shrivel up for lack of money for replacements.

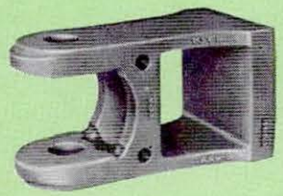
What the railroads need is a 'shoo-fly' to route them around the debacle of national transportation policy, while the wreck is being cleared up. They need some way of increasing earnings and investment capital while the slow machinery of government gradually corrects its mistakes.

President James Symes of the Pennsylvania has dramatized the railroad shortage of investment capital more frankly than any other railroad leader has yet done—in his proposal for the use of government credit to support railroad equipment loans. Few other railway spokesmen have shown much enthusiasm for the "Symes plan." None can deny, however, that there are many railroads which need equipment and other improvements. Much of it they either cannot finance at all, or only at excessive interest rates.

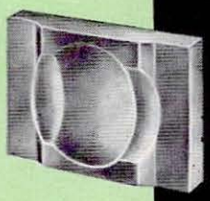
The railroad industry surely wants to avoid a critical shortage of capacity when general business gets going strongly. So it will either have to be more hospitable than it has been to expedients like the Symes plan, or contrive something more acceptable.

Expedients of similar purpose were proposed for the Transportation Act of 1958, but failed to be included. One was an income tax deduction for earnings set aside for capital expenditures. Another was more rapid depreciation of railroad property. These suggestions are reasonable and necessary. They should be enacted in the public interest in healthy and unsocialized railroads.

RESTORE RAILROAD INVESTMENT NOW: While full equality among the various forms of transportation is being worked out, railroad capacity and efficiency must not be allowed to deteriorate for lack of adequate new investment. Expedients to this end must be carefully contrived—not to jeopardize the railroads' status as unsubsidized free enterprise. Attainment of equitable treatment ten years hence is not the railroads' most pressing problem—they still must seek revival of full-scale investment for renewal and improvement in 1958 and 1959.



Y-37 Yoke for Twin Draft Gear



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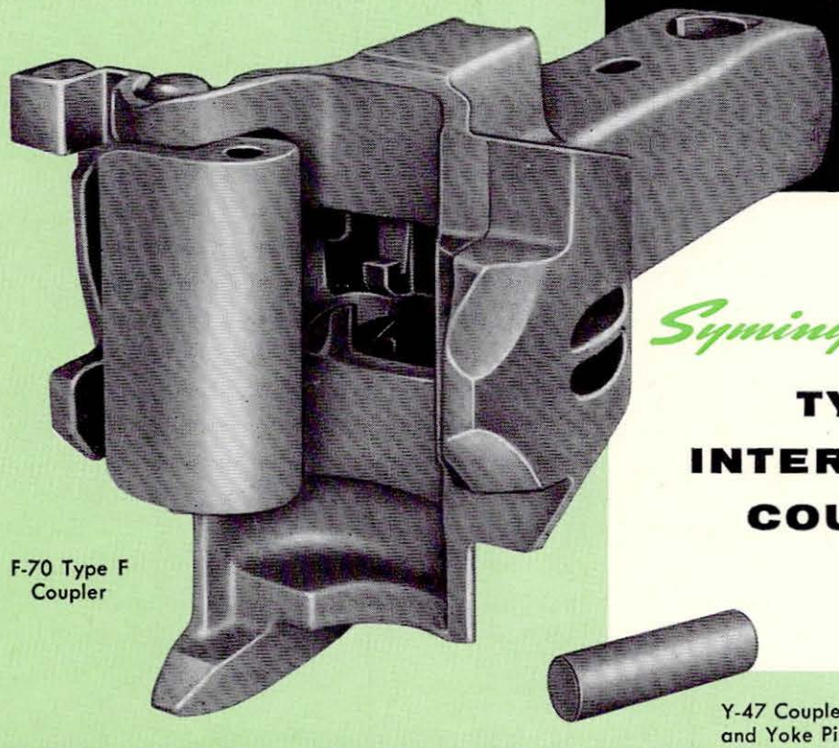

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Y-47 Coupler and Yoke Pin

Symington-Gould Type F Interlocking Couplers help reduce free slack, provide threefold anti-creep protection. Easier operating, these couplers provide greatly increased strength and service life. The interlocking feature prevents vertical slipovers, keeps cars in alignment. Safety shelf on F Coupler is designed to support mated coupler in event of pull-out.

Y-45 Yoke Standard Pocket

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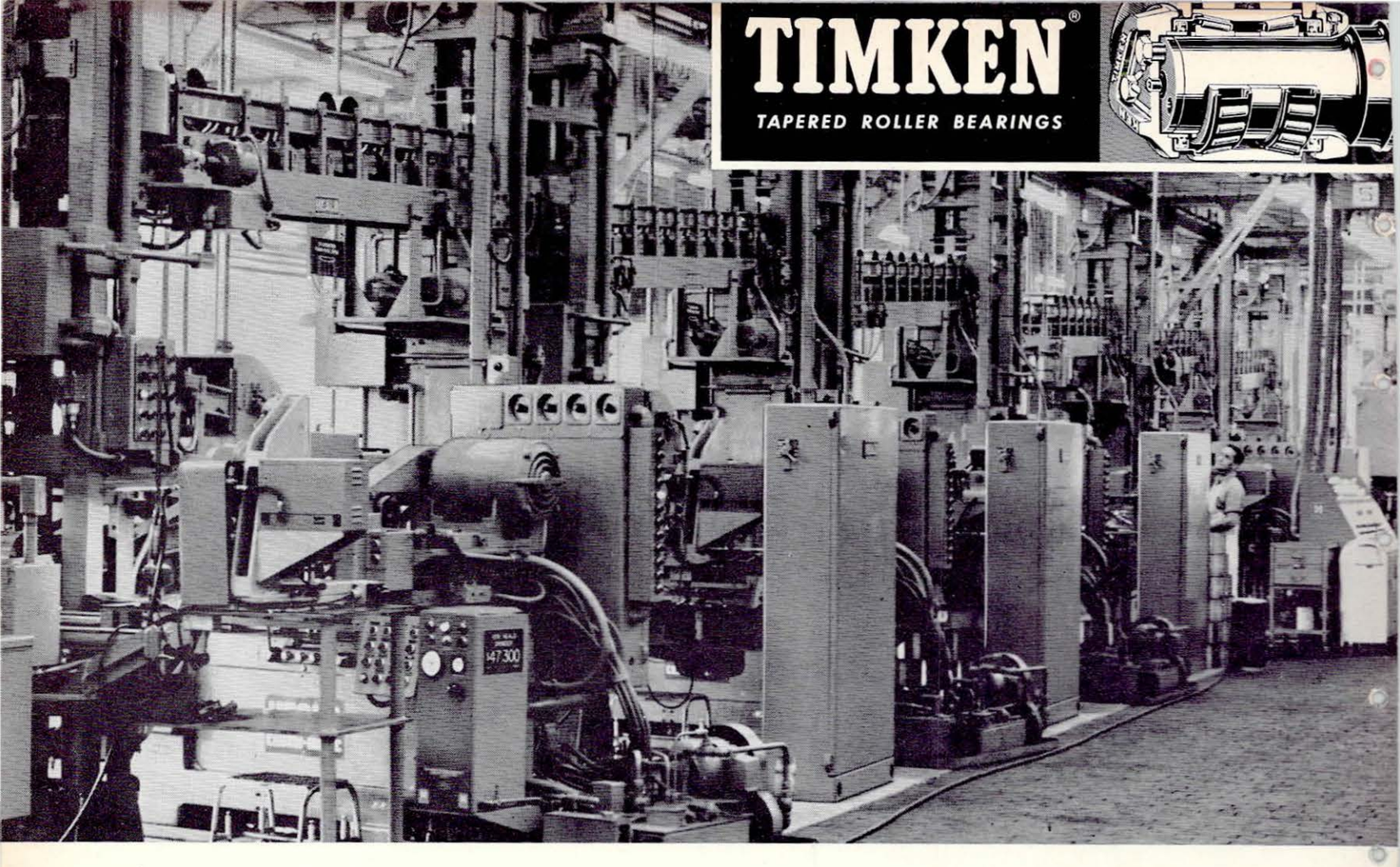

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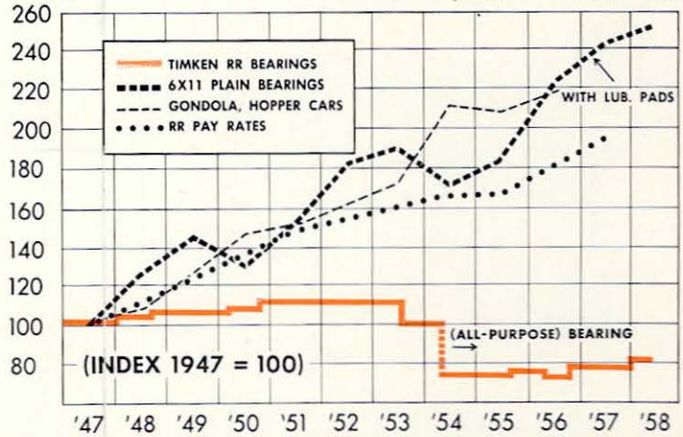
YOU'RE looking at a section of our amazing new $7,500,000 roller bearing plant at Columbus, Ohio. It turns out Timken® tapered roller bearings for freight cars only. Those ultra-modern machines (above) can mass-produce 20,000 car-sets a year—keeping costs down.

This plant is ready now to help you put *all* your freight cars on roller bearings. These "Roller Freight" cars will enable the railroads to slash their maintenance and operating costs by $288,000,000 a year—$144 per car! And if other costs keep going up (see chart at right), the investment you make in roller bearings today will pay off even more in years to come.

The best time to start these savings rolling in is right now. One smart way is to get together with the other railroads and *plan* your Timken bearing purchases, order a specified number every year. You'll not only establish more economical shop schedules—but also minimize your roller bearing costs. For example, the chart at right shows how the cost of friction bearings and other things a railroad uses have gone steadily upward while the cost of Timken roller bearings has come down and down. Keeping bearing costs down will be the automatic result of our new plant as you go "Roller Freight" on a planned basis.

Ask your maintenance and operating people what they think of "Roller Freight". One railroad's freight cars equipped with Timken roller bearings rolled over 300,000,000 car-miles with only *one* overheated bearing. On another line, Timken-bearing-equipped cars recently rolled 216,000 miles each over a 3-year period *without adding lubricant.* Savings like these show why Timken bearings give you a 24½% return on the investment—why 69 railroads and other car owners already have over 25,800 freight cars on Timken roller bearings.



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